

Operator's Manual



Rubber Track Tractor

938 Vario MT

TABF0938xJxxx1001-

940 Vario MT

TABF0940xJxxx1001-

943 Vario MT

TABF0943xJxxx1001-



Rubber Track Tractor

1	Safety	15
1.1	Safety instructions	17
1.1.1	Operator Manual	17
1.1.2	Safety symbol	17
1.1.3	Safety messages	17
1.1.4	Information messages	17
1.1.5	Safety signs	18
1.1.6	Important safety information	18
1.1.7	General safety instruction	19
1.1.8	Pressurized air	20
1.1.9	Asbestos information	20
1.1.10	Electrical storm injury prevention	20
1.1.11	Mount and dismount the machine	20
1.1.12	Before you start the engine	21
1.1.13	Start the engine	21
1.1.14	Before operation	21
1.1.15	Operating procedures	22
1.1.16	Parking	22
1.1.17	Prevent contact with power lines	23
1.1.18	Operator station	23
1.1.19	Cut and crush prevention	23
1.1.20	Rollover protective structure	24
1.1.21	Burn prevention	24
1.1.22	Coolant	24
1.1.23	Oils	25
1.1.24	High pressure lines	25
1.1.25	Fluid penetration	25
1.1.26	Batteries	26
1.1.27	Exhaust fumes	27
1.1.28	Noise prevention	27
1.1.29	Fire and explosion prevention	27
1.1.30	Fire extinguisher	28
1.1.31	Public road transportation	28
1.2	Safety signs and labels	30
1.3	Engine safety signs	31
1.3.1	Engine oil sign	32
1.3.2	Engine oil filter	32
1.3.3	Engine air cleaner	32
1.3.4	Separator filter	32
1.3.5	Fuel filter	33
1.3.6	Run-over hazard	33
1.3.7	Entanglement	33
1.3.8	Entanglement	33
1.3.9	High pressure hazard	34
1.3.10	Hot surface	34
1.3.11	Hot pressurized liquid hazard	34
1.3.12	Fuel filter	35
1.3.13	Separator filter	35
1.3.14	Engine oil filter	35
1.3.15	Belt routing	35
1.3.16	Air conditioning	36
1.3.17	Explosion hazard	36

1.3.18	Engine	36
1.4	Chassis safety signs	37
1.4.1	Filter decal	38
1.4.2	PIN plate	38
1.4.3	Riding hazard	38
1.4.4	No step	39
1.4.5	Torque	39
1.4.6	Torque	39
1.4.7	Crush warning	39
1.4.8	Torque	40
1.4.9	Fall off hazard	40
1.4.10	Radiation hazard	40
1.4.11	Tie down	40
1.4.12	Lift point	41
1.4.13	Engine cover support crush hazard	41
1.4.14	Run over hazard	41
1.4.15	Ultra low sulfur diesel	41
1.4.16	Jack points	42
1.5	Cab safety signs	43
1.5.1	Window exit	44
1.5.2	Park brake	44
1.5.3	Break glass - exit	44
1.5.4	Operators manual	44
1.5.5	Bystander notification	45
1.5.6	Roll-over hazard	45
1.5.7	Run-over hazard	45
1.5.8	California Proposition 65	45
1.6	Cab safety signs	46
1.6.1	Passenger seat	46
1.6.2	Category 2 filter	46
1.7	Hydraulic safety signs	47
1.7.1	Oil level	48
1.7.2	High pressure fluid	48
1.7.3	Pressurized fluid	48
1.8	Electrical safety signs	49
1.8.1	Battery disconnect relay	50
1.8.2	12 volt	50
1.8.3	Battery explosion	50
1.8.4	Electrical hazard	50
1.8.5	Relay	51
1.8.6	Fuse	51
1.8.7	Relay	51
1.8.8	Engine start switch	51
1.9	3-Point linkage safety signs (optional)	52
1.9.1	Power take off	52
1.9.2	Rear rollover	53
1.9.3	Tie down	53
1.9.4	Do not step	53
1.9.5	3-Point linkage lubrication points	53
2	Introduction	55
2.1	Machine identification information	57
2.1.1	Serial number definition	58
2.1.2	Machine serial plate	59
2.2	Intended use	60
2.3	Proper disposal of waste	61

2.4	Pre-Delivery	62
2.4.1	Pre-delivery checklist	62
2.5	EC -Declaration of Conformity	63
3	Operation	65
3.1	General inspection	73
3.1.1	Walk-around inspection	73
3.2	Seats	75
3.2.1	Basic seat	75
3.2.2	Deluxe seat	76
3.2.3	Instructor's seat	78
3.3	Mirrors	79
3.3.1	Adjust the mirrors	79
3.4	Console features and controls	80
3.4.1	Steering wheel controls, if equipped	80
3.4.2	Adjust the steering wheel position	80
3.4.3	Pedals	80
3.4.4	Multi-function lever	81
3.4.5	Instrument panel	81
3.4.6	Operating status display	83
3.4.7	Multiple display	84
3.4.8	Machine calibration/service codes	87
3.4.9	Calibrate the machine by code	88
3.4.10	Heating and ventilation control panel	89
3.4.11	Lighting control panel	89
3.4.12	Lamp options	90
3.5	Heating and ventilation system	92
3.5.1	Function indicators in the multiple display	92
3.5.2	Fan setting	92
3.5.3	Defrost/defog mode	93
3.5.4	Cool mode	93
3.5.5	Automatic mode	93
3.5.6	Ventilation	94
3.6	Multifunction armrest features	95
3.6.1	Multifunction armrest keypad	95
3.6.2	Parking brake operation	96
3.6.3	Joystick	97
3.6.4	Adjust the multifunction armrest	99
3.6.5	Power take-off and 3-point linkage control	99
3.6.6	Crossgate lever	101
3.6.7	Hydraulic levers	101
3.6.8	Throttle	102
3.6.9	Foot throttle adjustment	102
3.7	Cab features and controls	103
3.7.1	Interior lamps	103
3.7.2	Come home lighting	103
3.7.3	Bluetooth microphone	103
3.7.4	Pair a Bluetooth component	104
3.7.5	Radio options	104
3.7.6	Roof electrical connections	105
3.7.7	Electrical connections	105
3.7.8	Power ports	105
3.7.9	Audio jack	106
3.7.10	Secondary brake lever	107
3.7.11	Operate the secondary brake	107
3.7.12	Cab filters	108

3.7.13	Auxiliary mounting bar	108
3.7.14	Headliner service door	109
3.7.15	Step options	109
3.8	Terminal basics	110
3.8.1	Varioterminal display	110
3.8.2	External control panel	110
3.8.3	Page layout and screen allocation	111
3.8.4	Navigation - quick jumps	112
3.8.5	Navigation - control by touch	112
3.8.6	Navigation - control with external control panel	113
3.8.7	Clean the terminal	113
3.9	Terminal settings	115
3.9.1	Set the language	116
3.9.2	Set the date and time	118
3.9.3	Set the audio level	118
3.9.4	Set the screen brightness	120
3.9.5	Day and night mode	121
3.9.6	Calibrate the touch screen	122
3.9.7	Do a touch test	122
3.9.8	ISOBUS information	123
3.9.9	Call up the On-board computer	124
3.9.10	Adjust the triggers (tractor)	125
3.9.11	Adjust the triggers (implement)	125
3.10	Overview terminal screens	127
3.10.1	Menu overview of Tracktractor info screen	127
3.10.2	Menu overview of Tracktractor main menu screen part 1	128
3.10.3	Menu overview of Tracktractor main menu screen part 2	130
3.10.4	Menu overview of Management screen	132
3.10.5	On-board computer menu	134
3.11	Info+	136
3.11.1	Info+ feature	136
3.11.2	Info+ positioning	136
3.11.3	3-point Hitch Info+ screen	136
3.11.4	Hydraulic Valves settings Info+ screen	137
3.11.5	Fuel Consumption Info+ screen	137
3.11.6	Create a Quick jump in the Info+ screen	138
3.11.7	Invalid Quick jump target	139
3.12	Overview of the individual pages	140
3.12.1	Tractor info	140
3.12.2	Tractor main	141
3.12.2.1	Rear 3-pt hitch	143
3.12.2.2	Rear 3-pt hitch details	144
3.12.2.3	Rear hydraulic valve settings	144
3.12.2.4	Assignment control elements	145
3.12.3	Engine and transmission	145
3.12.3.1	TMS	146
3.12.3.2	Fuel consumption	147
3.12.4	Variotronic TI	148
3.12.4.1	Manual configuration	149
3.12.4.2	General function - Variotronic TI	149
3.12.4.3	Functions and dependencies	150
3.12.4.4	Call up and activate Variotronic TI	152
3.12.4.5	Joystick assignment	153
3.12.4.6	Record an operational sequence	154
3.12.4.7	Start an operational sequence	158
3.12.4.8	Configure an operational sequence manually	159
3.12.4.9	Step mode	160

3.12.5	Diagnostics	162
3.12.6	Varioterminal	162
3.12.6.1	Varioterminal Main Menu	163
3.12.6.2	Data exchange	164
3.13	Implement settings	165
3.13.1	Install a rear-mounted implement	166
3.13.2	Find the implement settings	168
3.13.3	Set the working width	169
3.13.4	Rear-mounted implement settings	172
3.13.5	Set the coupling length	172
3.13.6	Set the center of the rear-mounted implement	174
3.13.7	Rear-mounted implement trigger settings	177
3.13.8	Load the implement settings	177
3.13.9	Save the implement settings	178
3.13.10	Settings that can be saved	179
3.14	Exchange implement data and field data	181
3.14.1	Plug in the USB stick and call up data exchange	181
3.14.2	Insert USB stick	181
3.14.3	Call up the data exchange	181
3.14.4	Data exchange information	182
3.14.5	Select and transfer individual data to the USB stick	183
3.14.6	Select and transfer all data to the USB stick	184
3.14.7	Select and transfer individual data from the USB stick	186
3.14.8	Select and transfer all data from the USB stick	187
3.15	Tractor Management System	189
3.15.1	Store engine speeds	189
3.15.2	General tractor management	189
3.15.3	Tractor management system (TMS)	190
3.15.4	Accelerator pedal - operation	191
3.15.5	Set TMS engine speed range	192
3.15.6	Activate the Tractor Management Systems (TMS)	192
3.15.7	Reversible fan	193
3.15.8	Set the reversible fan intervals	194
3.15.9	Manually activate the reversible fan	195
3.16	Valve settings	197
3.16.1	Locking individual valves	197
3.16.2	Set the time function	197
3.16.3	Priority function	198
3.16.4	Set the valve response sensitivity	199
3.16.5	Set the flow rate	200
3.16.6	Activate the external valve operation	200
3.16.7	Set the float position	201
3.16.7.1	Set the float position on and off for the linear module valves	202
3.17	Terminal operations for the 3-point linkage	203
3.17.1	Call up the 3-point linkage menu	203
3.17.2	Rear 3-pt hitch	204
3.17.3	Rear 3-pt hitch details	205
3.17.4	Power take-off and 3-point linkage control	205
3.17.5	Lock and unlock the 3-point linkage	206
3.17.6	Prioritize the 3-point linkage	208
3.17.7	Set the lift height limit	208
3.17.8	Set the raise/lower speed	209
3.17.9	Shock load stabilizing system	209
3.17.10	Set the shock load stabilizing system	210
3.17.11	Set the position-tractive power-mix control	210
3.17.12	Electronic slip control system (optional)	210
3.17.13	Activate the slip control system	211

3.17.14	Set the slip target value	213
3.17.15	Set the sensitivity of the slip control system	213
3.18	Storage compartments	214
3.18.1	Literature holder	214
3.19	Windows	215
3.19.1	Sun visor	215
3.19.2	Windshield wipers	215
3.19.3	Windscreen washer tank	216
3.19.4	Open the rear window	217
3.19.5	Exit the cab in an emergency	217
3.19.6	Rear window grommet	218
3.20	Rear electrical connections	219
3.20.1	Trailer connector	219
3.20.2	ISO 11783 connector	220
3.20.3	Implement electrical connector	220
3.21	Before starting the engine	221
3.21.1	Check the engine oil level	221
3.21.2	Do a check of the hydraulic oil level	222
3.21.3	Check the coolant level	222
3.21.4	Do a check of the fan oil level	223
3.21.5	Do a check of the transmission oil level	223
3.21.6	Do a check of the final drive oil level	224
3.21.7	Add diesel fuel	225
3.21.8	Add diesel exhaust fluid AdBlue®	226
3.21.9	Check the windscreen washer fluid level	226
3.21.10	Leak-testing the compressed air system	227
3.21.11	Drain the compressed air system	227
3.22	Starting	228
3.22.1	Pre-start checks	228
3.22.2	Engine start switch	228
3.22.3	Start the engine	228
3.22.4	Start the engine with jumper cables	229
3.22.5	Cold weather operation	230
3.22.6	Set the terminal display - engine on - tractor stationary	230
3.22.7	Set the terminal display - engine on - tractor moving	232
3.23	Stopping	233
3.23.1	Stop and park the machine	233
3.23.2	Stop the engine	233
3.23.3	Terminal display when the engine is turned off	233
3.24	Towing and transportation	235
3.24.1	Prepare to operate the machine on a road	235
3.24.2	Operate the machine on a road with an implement attached to the 3 point linkage	236
3.24.3	High speed road operation	237
3.24.4	Release the parking brake for towing	237
3.24.5	Tow the machine	238
3.24.6	Tow a stuck machine	239
3.24.7	Charge the service brake accumulator	239
3.24.8	Transport the machine on a trailer	240
3.25	Transmission	241
3.25.1	Joystick	241
3.25.2	Neutral position	241
3.25.3	Acceleration/Deceleration rate	242
3.25.4	Set the acceleration rate	243
3.25.5	Move forward from a stop	244
3.25.6	Move in reverse from a stop	245
3.25.7	Turboclutch function	245

3.25.8	Deactivate/Activate the turboclutch function	246
3.25.9	Change the direction of travel	247
3.25.10	Program the change in direction of travel speeds	248
3.25.11	Calibrate the speed display	249
3.26	Cruise control	252
3.26.1	Program the cruise control speed	252
3.26.2	Activate the cruise control	253
3.27	Load limit control	255
3.27.1	Set the load limit control	255
3.28	3-Point linkage	256
3.28.1	Remove the quick hitch (if equipped)	256
3.28.2	Install the quick hitch (if equipped)	257
3.28.3	Set the 3-point linkage height	258
3.28.4	Adjust the draft arm	259
3.28.5	Adjust the top link position	259
3.28.6	Adjust the top link length	260
3.28.7	Adjust the sway blocks	260
3.28.8	Prevent side-sway in the 3-point linkage	261
3.28.9	Set the side-sway in the 3-point linkage	262
3.28.10	Lubricate the lift linkage	262
3.28.11	Operate the hydraulic top-link	263
3.28.12	Operate the 3-point linkage	263
3.28.13	Operate the 3-point linkage with the external switches	264
3.28.14	Automatic power lift function	265
3.28.15	Connect an implement to the 3-point linkage	266
3.28.16	Connect an implement to the quick hitch	267
3.28.17	Disconnect an implement from the 3-point linkage	267
3.28.18	Disconnect an implement from the quick hitch	268
3.29	Drawbar and mechanical hitch couplings	269
3.29.1	General	269
3.29.2	Calculation of towing capacity	269
3.29.3	Technical data of towing equipment	271
3.29.4	Drawbar features	272
3.29.5	Replace the wear plates and the rubber stops on the standard drawbar	274
3.29.6	Connect category four drawbar implements	275
3.29.7	Adjust the drawbar position	276
3.29.8	Safety chain	278
3.30	Power Take-Off (PTO)	279
3.30.1	Connect the PTO shaft to the PTO drive	280
3.30.2	Operate the PTO	280
3.30.3	Stationary PTO	282
3.30.4	Activate the stationary PTO	282
3.30.5	Automatic PTO function	282
3.30.6	PTO automatic mode with power lift	283
3.30.7	Modify the standard settings for rear automatic mode	284
3.30.8	Restore the standard setting for rear automatic mode	287
3.30.9	Calibrate the PTO clutch	288
3.31	Hydraulic control valves	290
3.31.1	Adjust the hydraulic control valves	291
3.31.2	Hydraulic motors	293
3.31.3	Hydraulic valve lock	293
3.31.4	Lock a specific hydraulic valve	294
3.31.5	Drive the machine on a road with an implement	294
3.31.6	Connect a hydraulic hose to a coupler	295
3.31.7	Disconnect a hydraulic hose from a coupler	295
3.31.8	Manual operation of the EHS valves in emergency mode	296
3.31.8.1	Lower the hitch in an emergency	298

3.32	Common hydraulic connections	300
3.32.1	Connect a single acting cylinder	300
3.32.2	Connect a double acting cylinder	300
3.32.3	Connect a hydraulic motor	301
3.32.4	Connect a hydraulic motor with a flow control valve	301
3.32.5	Connect a grain cart with an auger motor	302
3.32.6	Connect a semi-mounted vacuum planter with lift-assist wheels	302
3.32.7	Connect a vacuum planter	304
3.32.8	Connect an air seeder or grain drill	305
3.32.9	Connect the auxiliary implement controls	306
3.32.10	Connect the spray system pump	306
3.32.11	Connect a hydraulic motor to power beyond	306
3.32.12	Hydraulic power beyond	307
3.32.13	Connect the auxiliary implement control valve with load sensing	307
3.32.14	Connect the auxiliary implement control valve without load sensing	308
3.33	Brake requirements	309
3.33.1	Foot brake (service brake)	309
3.33.2	Towing (trailing implement or trailer)	309
3.33.3	Machine serial plate	310
3.34	Hydraulic trailer brake	312
3.34.1	Hydraulic trailer brake	312
3.34.2	Connect the hydraulic trailer brake	312
3.34.3	Disconnect the hydraulic trailer brake	313
3.35	Air system	314
3.35.1	Connect the air trailer brakes	314
3.35.2	Disconnect the air trailer brakes	315
3.35.3	Air coupler	316
3.35.4	Leak-testing the compressed air system	317
3.35.5	Drain the compressed air system	317
3.35.6	Change the desiccant cartridge	317
3.36	Performance recommendations	319
3.36.1	Machine performance	319
3.37	Tracks	320
3.37.1	Track selection	320
3.37.2	General ag tracks	320
3.37.3	Extreme ag tracks	320
3.37.4	Extreme application tracks	320
3.37.5	Width of track	321
3.37.6	Debris deflectors	321
3.37.7	Gauge width settings	322
3.38	Machine ballasting	324
3.38.1	Levels of ballasting	325
3.38.2	Adjust the ballast	325
3.38.3	Maximum machine weight	326
3.38.4	Weights	326
3.38.5	Install front weights	328
3.38.6	Combinations of idler weights	329
3.38.7	Install auxiliary idler weight	330
3.39	Track system	332
3.39.1	Undercarriage	332
3.39.2	Turning performance	333
3.40	Moldboard plough applications	334
3.40.1	Moldboard plough applications	334
3.40.2	Rollover ploughs	334
3.41	Camera settings	335
3.41.1	Position the camera image	335

3.41.2	Change cameras	335
3.41.3	Display the camera image while reversing	336
3.41.4	Change the camera to and from full-screen	337
3.41.5	Adjust the brightness	337
3.41.6	Adjust the contrast	338
3.41.7	Adjust the color saturation	339
4	Engine Operation	341
4.1	Safety instructions	343
4.2	To the user	344
4.2.1	Engine type designations	344
4.2.2	Location of the engine serial number	345
4.2.3	Type plate of the electronic control unit	346
4.3	Technical data	347
4.3.1	Principal dimensions and data	347
4.3.2	Fuel system	347
4.3.3	Lubrication system	347
4.3.4	Cooling system	348
4.3.5	Selective Catalyst Reduction (SCR) system technical data	348
4.4	Air control system	350
4.4.1	2 stage turbocharging	351
4.4.2	Interstage charge air cooling	351
4.4.3	Throttle valve	351
4.4.4	Exhaust gas recirculation system	352
4.5	Fuel system	353
4.6	Engine control system	355
4.7	Lubrication system	356
4.7.1	Oil pressure regulating valve	357
4.7.2	Oil filter and oil cooler	357
4.8	Cooling system	358
4.8.1	Engine heater	358
4.9	Electrical system	359
4.10	SCR system	360
4.10.1	Selective Catalyst Reduction (SCR) system overview	360
4.10.2	Selective Catalyst Reduction (SCR) system components and their functions	361
4.11	Operation and driving	364
4.12	Daily pre-start check	365
4.13	Starting the engine	366
4.13.1	Break in the engine	366
4.14	Starting the engine in cold conditions	368
4.14.1	Warming up the engine	368
4.15	Start the engine with an auxiliary battery	369
4.16	Attention during operation	370
4.17	Stopping the engine	371
5	Maintenance	373
5.1	Lubricant viscosities and refill capacities	377
5.1.1	Lubricant viscosities for ambient temperatures	377
5.1.2	Lubricant viscosities	377
5.1.3	Fluids and capacities	378
5.1.4	Biodegradable hydraulic oil	378
5.2	Service intervals	380
5.2.1	Maintenance schedule	380
5.3	Engine maintenance information	383

5.3.1	Maintenance chart	383
5.3.2	Maintenance to be made daily or at 10 hours intervals	384
5.3.2.1	Do a check for the engine oil level	384
5.3.2.2	Check coolant level	384
5.3.2.3	Check for leakages	385
5.3.3	Maintenance to be made weekly or at 100 hours interval	385
5.3.3.1	Clean cooling system (from outside)	385
5.3.3.2	Examine the condition of the belts	385
5.3.4	Maintenance to be made at 400 - 800 hours intervals	386
5.3.4.1	Change engine oil	386
5.3.4.2	Change oil filter	386
5.3.4.3	Update the engine software	387
5.3.5	Change fuel filters	387
5.3.6	Bleed the fuel system	388
5.3.7	Maintenance to be made at 4000 hours intervals	390
5.3.7.1	Check turbocharger play and check that the intercooler cell is clean	390
5.3.8	Maintenance to be made once a year or 1200 hours	390
5.3.8.1	Selective Catalyst Reduction (SCR) system maintenance	390
5.3.8.2	Replace the main filter and the inlet filter of the supply module	391
5.3.9	Maintenance to be made every two years	393
5.3.9.1	Change coolant	393
5.3.10	Additional maintenance instructions	394
5.3.10.1	Before the cold season	394
5.3.10.2	Tightening torques	394
5.3.10.3	Coolant quality requirements	395
5.3.10.4	Fuel quality requirements	396
5.3.10.5	Fitting the crankshaft hub	399
5.3.10.6	Fitting the injectors	401
5.4	Electrical fuses and relays	402
5.4.1	Rear terminal mini-fuse (RTMF) relay box	402
5.4.2	Power distribution module	403
5.4.3	Fuse and relay panel	405
5.5	Engine	411
5.5.1	Replace the engine air filter	411
5.5.2	Check the engine oil level	412
5.5.3	Change the engine oil and oil filter	412
5.5.4	Examine the used filters	414
5.5.5	Engine oil sample port	415
5.5.6	Open the engine cover	415
5.5.7	Engine temperature	415
5.5.8	Engine belts	415
5.5.9	Remove the main serpentine belt	416
5.5.10	Install the main serpentine belt	417
5.5.11	Replace the accessory belt	418
5.5.12	Replace the water pump belt	419
5.6	Fuel system	421
5.6.1	Fuel cap	421
5.6.2	Add diesel fuel	421
5.6.3	Fuel shutoff valve	422
5.6.4	Drain water and sediment from the fuel tank	422
5.6.5	Drain water from the fuel-water separator	423
5.6.6	Prime the fuel system	423
5.6.7	Clean the fuel tank	424
5.6.8	Change the prefilter and the fuel filters	425
5.7	Selective catalytic reduction (SCR) System	427
5.7.1	Change the supply module filter	427
5.7.2	Add diesel exhaust fluid AdBlue®	428

5.7.3	Drain the diesel exhaust fluid (AdBlue®) tank	428
5.7.4	DEF storage and shelf life	429
5.8	Cooling system	430
5.8.1	Clean the cooling cores	430
5.8.2	Check the coolant level	431
5.8.3	Cooling system additives	431
5.8.4	Coolant sample	431
5.8.5	Coolant system fluid	432
5.8.6	Drain the engine coolant	432
5.8.7	Flush the cooling system	434
5.8.8	Refill the cooling system	434
5.9	Hydraulics	435
5.9.1	Do a check of the hydraulic oil level	435
5.9.2	Change the hydraulic system oil	435
5.9.3	Change the hydraulic filters	436
5.9.4	Do a check of the final drive oil level	437
5.9.5	Do a check of the transmission oil level	437
5.9.6	Change the transmission oil	438
5.9.7	Change the transmission filter	439
5.9.8	Change the filter cartridge for the transmission	440
5.9.9	Replace the filter for the implement case drain	441
5.9.10	Change the hydraulic fan filter	441
5.9.11	Change the reservoir breather	442
5.9.12	Change the hydraulic fan oil	442
5.10	Cab filtration	444
5.10.1	Cab filters	444
5.10.2	Recirculation filter	445
5.10.3	Filter maintenance	445
5.10.4	Clean the filter	445
5.10.5	Replace the recirculation filter	445
5.10.6	Replace the fresh air filter	446
5.11	Wiper blades	448
5.11.1	Change the wiper blades	448
5.11.2	Check the windscreen washer fluid level	448
5.12	Undercarriage system	449
5.12.1	Do a check of the oil level for the drive wheel hubs	449
5.12.2	Change the drive wheel hub oil	449
5.12.3	Do a check of the oil level for the idler wheel and the mid roller wheel hubs	450
5.12.4	Change the oil on the idler and the mid roller wheel hub	450
5.12.5	Track and undercarriage inspection	451
5.12.6	Gauge width settings	451
5.12.7	Adjust the gauge spacing	452
5.12.8	Measure the gauge spacing	457
5.12.9	Release the track tension	458
5.12.10	Release the pressure between the nipple and the filler valve	460
5.12.11	Add tension to the tracks	460
5.12.12	Replace a track	463
5.12.13	Track alignment	464
5.12.14	Check the alignment	465
5.12.15	Adjust the track alignment	465
5.12.16	Basic rules for maximizing track life	466
5.13	Batteries	467
5.13.1	Remove the batteries	467
5.13.2	Install the batteries	468
5.14	Maintenance access	471
5.14.1	Remove the guards	471
5.14.2	Install the guards	472

5.15	Preparing for the cold season	473
5.15.1	Cold season	473
5.15.2	Cold start checklist	473
6	Troubleshooting	475
6.1	Heating and air conditioning troubleshooting	477
6.2	Electrical system troubleshooting	478
6.3	Brake troubleshooting	479
6.4	Engine troubleshooting	481
6.4.1	Troubleshooting of the engine	485
6.5	Hydraulic troubleshooting	490
6.6	3-point linkage troubleshooting	492
6.7	Transmission troubleshooting	493
6.8	Steering system troubleshooting	494
6.9	Guidance troubleshooting	499
6.9.1	VarioGuide ready indicator is not on	499
6.9.2	VarioGuide de-activates during operation	499
6.10	Machine error codes	501
6.10.1	Fault code 00.0.00 -	502
6.10.2	Fault code 01.1.00 -	506
6.10.3	Fault code 02.0.00 -	514
6.10.4	Fault code 03.1.00 -	516
6.10.5	Fault code 04.1.00 -	518
6.10.6	Fault code 06.1.00 -	536
6.10.7	Fault code 08.1.00 -	542
6.10.8	Fault code 0A.1.00 -	548
6.10.9	Fault code 0B.1.00 -	561
6.10.10	Fault code 0D.1.00 -	565
6.10.11	Fault code 0E.1.00 -	568
6.10.12	Fault code 0F.1.00 -	573
6.10.13	Fault code 10.1.00 -	578
6.10.14	Error code 17.1.00: Joystick	580
6.10.15	Fault code 18.1.00 - track guidance preparation	581
6.10.16	Fault code 1D.1.00 -	585
6.10.17	Fault code 1F.1.00: Basic control unit	598
6.10.18	Fault code 20.1.00 -	599
7	Specifications	605
7.1	Engine specifications	607
7.2	Torque specifications	608
7.2.1	Constant torque hose clamps	608
7.3	General dimensions	609
7.3.1	Rear view dimensions	610
7.4	Shipping weights	611
7.5	Machine specifications	613
7.6	Machine components	615
7.7	Noise vibration level	616
8	Index	617

1 Safety

1.1	Safety instructions	17
1.1.1	Operator Manual	17
1.1.2	Safety symbol	17
1.1.3	Safety messages	17
1.1.4	Information messages	17
1.1.5	Safety signs	18
1.1.6	Important safety information	18
1.1.7	General safety instruction	19
1.1.8	Pressurized air	20
1.1.9	Asbestos information	20
1.1.10	Electrical storm injury prevention	20
1.1.11	Mount and dismount the machine	20
1.1.12	Before you start the engine	21
1.1.13	Start the engine	21
1.1.14	Before operation	21
1.1.15	Operating procedures	22
1.1.16	Parking	22
1.1.17	Prevent contact with power lines	23
1.1.18	Operator station	23
1.1.19	Cut and crush prevention	23
1.1.20	Rollover protective structure	24
1.1.21	Burn prevention	24
1.1.22	Coolant	24
1.1.23	Oils	25
1.1.24	High pressure lines	25
1.1.25	Fluid penetration	25
1.1.26	Batteries	26
1.1.27	Exhaust fumes	27
1.1.28	Noise prevention	27
1.1.29	Fire and explosion prevention	27
1.1.30	Fire extinguisher	28
1.1.31	Public road transportation	28
1.2	Safety signs and labels	30
1.3	Engine safety signs	31
1.3.1	Engine oil sign	32
1.3.2	Engine oil filter	32
1.3.3	Engine air cleaner	32
1.3.4	Separator filter	32
1.3.5	Fuel filter	33
1.3.6	Run-over hazard	33
1.3.7	Entanglement	33
1.3.8	Entanglement	33
1.3.9	High pressure hazard	34
1.3.10	Hot surface	34
1.3.11	Hot pressurized liquid hazard	34
1.3.12	Fuel filter	35
1.3.13	Separator filter	35
1.3.14	Engine oil filter	35
1.3.15	Belt routing	35
1.3.16	Air conditioning	36
1.3.17	Explosion hazard	36

1.3.18	Engine	36
1.4	Chassis safety signs	37
1.4.1	Filter decal	38
1.4.2	PIN plate	38
1.4.3	Riding hazard	38
1.4.4	No step	39
1.4.5	Torque	39
1.4.6	Torque	39
1.4.7	Crush warning	39
1.4.8	Torque	40
1.4.9	Fall off hazard	40
1.4.10	Radiation hazard	40
1.4.11	Tie down	40
1.4.12	Lift point	41
1.4.13	Engine cover support crush hazard	41
1.4.14	Run over hazard	41
1.4.15	Ultra low sulfur diesel	41
1.4.16	Jack points	42
1.5	Cab safety signs	43
1.5.1	Window exit	44
1.5.2	Park brake	44
1.5.3	Break glass - exit	44
1.5.4	Operators manual	44
1.5.5	Bystander notification	45
1.5.6	Roll-over hazard	45
1.5.7	Run-over hazard	45
1.5.8	California Proposition 65	45
1.6	Cab safety signs	46
1.6.1	Passenger seat	46
1.6.2	Category 2 filter	46
1.7	Hydraulic safety signs	47
1.7.1	Oil level	48
1.7.2	High pressure fluid	48
1.7.3	Pressurized fluid	48
1.8	Electrical safety signs	49
1.8.1	Battery disconnect relay	50
1.8.2	12 volt	50
1.8.3	Battery explosion	50
1.8.4	Electrical hazard	50
1.8.5	Relay	51
1.8.6	Fuse	51
1.8.7	Relay	51
1.8.8	Engine start switch	51
1.9	3-Point linkage safety signs (optional)	52
1.9.1	Power take off	52
1.9.2	Rear rollover	53
1.9.3	Tie down	53
1.9.4	Do not step	53
1.9.5	3-Point linkage lubrication points	53

1.1 Safety instructions

1.1.1 Operator Manual

This operator manual uses the latest information available at the time of publication. Read the operator manual carefully before operating the machine.

Right-hand and left-hand, as used in the operator manual, is determined by facing the direction that the machine travels when in use.

Photos, illustrations, and data used in the operator manual were current at the time of publishing. Because of possible production changes, each machine can vary. Manufacturer reserves the right to redesign and change the machine as necessary without notification.

1.1.2 Safety symbol

The safety symbol tells you about a potentially hazardous area!

Look for the safety symbol in this manual and on the machine. The safety symbols tell you that there is important safety instructions in the manual.



Fig. 1

1.1.3 Safety messages

The words DANGER, WARNING or CAUTION are used with the safety symbol. Learn these safety messages and obey the recommended precautions and safety instructions.



DANGER:
If you do not obey the recommended precautions and safety instructions, DEATH OR INJURY will occur.



WARNING:
If you do not obey the recommended precautions and safety instructions, DEATH OR INJURY can occur.



CAUTION:
If you do not obey the recommended precautions and safety instructions, INJURY can possibly occur.



Fig. 2

1.1.4 Information messages

The words important and note are not related to personal safety, and are used to give information about the operation and servicing of the machine.

IMPORTANT: Identifies special instructions or procedures which, if not followed, can cause damage to the machine, the process, or the area around the machine.

NOTE: Information to make procedures easier.

1.1.5 Safety signs



WARNING:

Do not remove the safety signs. Replace safety signs that you cannot read, are damaged, or are missing.

Clean the machine surface with a weak soap and water solution before you replace the safety signs. Replacement safety signs are available from your dealer.

Always make sure that safety signs are in the correct locations and that you can read the safety signs. Illustrations of safety sign locations are in this section.

Keep the safety signs clean. If necessary, use a weak soap and water solution.

1.1.6 Important safety information

IMPORTANT: Any Modifications to the machine or systems not authorized by AGCO will void the AGCO Warranty. This includes, but is not limited to hitches.



WARNING:

When replacement parts are required for this product, AGCO recommends using AGCO replacement parts or parts with equivalent specifications including, but not limited to, physical dimensions, type, strength and material. Failure to heed this warning can get untimely failures, product damage, personal injury or death.

Failure to obey basic safety rules and precautions can cause personal injuries during product operation, maintenance, or repair. Know dangerous situations before an injury occurs.

A person must be alert to possible dangers. This person must also have the necessary training, skills and tools to do these operations correctly.

Incorrect operation, lubrication, maintenance or repair of this product can be dangerous and can result in injury or death.

Read and understand all the information about the operation, lubrication, maintenance, and repair before operating on this machine.

The product and this manual give safety precautions and warnings. Bodily injury or death can occur to you or to other persons if all warnings are not heeded.

Not every possible circumstance that can involve a potential danger can be anticipated. The warnings in this publication and on the product are, thus, not all inclusive. If a tool or procedure, not recommended by AGCO, is used, make sure they are safe for everyone.

An operator must make sure the product will not be dangerous or damaged by the operation, lubrication, maintenance or repair procedures selected. Information, specifications, and illustrations in this publication come from information available at the time of publication production.

Specifications, torques, pressures, measurements, adjustments, illustrations, and other items can change at any time. These changes can change the service that is given to the product. Get the complete and most current information before starting a job. AGCO dealers have the most current information available.

1.1.7 General safety instruction



CAUTION:
Carefully read the operator manual before operating the machine. See all instructions and safety rules when operating or doing maintenance.



Fig. 3

Do not start the engine until the area is free of personnel. Honk the horn two times to tell others. This will help prevent personal injury because machine movement can occur.

Know the width of the equipment to keep the correct clearance when operating near fences or near boundary blockage.

Wear a hard hat, protective glasses, and other protective equipment, as necessary.

Do not wear loose clothing or jewelry that can catch on controls or on other parts of the machine.

Make sure that all protective guards and all covers are attached in position on the machine.



Fig. 4

Keep the machine free from unwanted material. Remove unwanted material, oil, tools, and other items from the deck, from walkways, and from steps.

Make sure lunch boxes, tools, and other loose items that are not a part of the machine are attached.

Know the applicable work location hand signals and the personnel that are approved to give the hand signals. Get hand signals from one person only.

Do not put maintenance fluids into glass containers. Drain all liquids into an approved container.

Discard all drained fluids and discard all filters. Refer to local regulations.

Use all cleaning solutions with precaution.

Record all necessary repairs.

Do not let untrained or not approved personnel on the machine.

Do not smoke when doing work an air conditioner. Also, if there is refrigerant gas around, do not smoke. Breathing the fumes that are released from a flame that touches air conditioner refrigerant can cause bodily injury or death.

Breathing gas from air conditioner refrigerant through a lighted cigarette can cause bodily injury or death.

Do the following before completing maintenance unless receiving other instructions:

- Parked the machine on level ground.
- Lower the implements to the ground.
- Park the machine.

1. Safety

- Stop the engine.
- Remove the switch key.
- Cool the machine.

Use other precautions if the conditions and environment make it necessary.

For operating this machine in forestry or loader operations:

This machine does not have a falling-object protective structure and must not be used in forestry or loader operations.

1.1.8 Pressurized air

Air under pressure can cause personal injury. When pressurized air is used for cleaning, wear a protective face shield, protective clothing and protective shoes.

The maximum air pressure for cleaning purposes must be below 205 kPa (30 psi).

1.1.9 Asbestos information

AGCO equipment and replacement parts are asbestos free. AGCO recommends the use of only correct AGCO replacement parts.

1.1.10 Electrical storm injury prevention

When lightning is striking in the vicinity of the machine, the operator should not attempt to dismount or mount the machine.

If you are in the operator's station during an electrical storm, stay in the operator's station. If you are on the ground during an electrical storm, stay away from the machine.

1.1.11 Mount and dismount the machine

Mount the machine and dismount the machine only at locations that have steps and/or hand holds. Before mounting the machine, clean the steps and the hand holds. Inspect the stairs and hand holds. Make any necessary repairs.

When dismounting the machine, descend the steps backwards, and maintain a three-point contact with the steps and hand holds. Three-point contact is two feet and one hand or one foot and two hands.

Never mount a moving machine. Never dismount a moving machine. Never jump off the machine except in an emergency.

Do not carry tools or supplies when you try to mount the machine or when you try to dismount the machine. Use a hand line to pull equipment onto the platform.

Do not use any controls as hand holds when you enter the operator compartment or when you exit the operator compartment.

1.1.12 Before you start the engine

Start the engine only from the operator compartment. Never short across the starter terminals or batteries. Shorting can damage electrical system or cause unexpected machine movement.

Adjust the seat so full pedal travel can be achieved with operator's back against seat back.

Make sure the machine is equipped with a lighting system sufficient for job conditions. Make sure all machine lights are working properly.

Before starting the engine or moving the machine, make sure no one is under, around or on machine. Make sure area is free of personnel.

To honk horn the key must be turned to "run" to enable the horn. As a warning honk horn twice, to alert others.



Fig. 5

1.1.13 Start the engine

Move all hydraulic controls to the hold position before you start the engine.

Make sure the machine is in park.

Press the clutch pedal before you turn the ignition key. The starter will not operate until the clutch has been pressed. To stop the starter, turn the key to off or release the clutch pedal.

Diesel engine exhaust contains material of combustion which can be dangerous. Always operate the engine in an open area. If in a closed in area, send the exhaust out.



WARNING:

If you turn the steering wheel with the transmission in the neutral position and the engine at idle speed, the machine will turn.



WARNING:

Do not use ether. Ether will cause engine damage and/or personal injury.

Do not start the engine until the area is free of personnel to prevent personal injury because of unexpected machine movement.

1.1.14 Before operation

Clear all personnel from around the machine and the area.

Clear all obstacles from machine's path. Be careful of dangers, (electrical power lines, ditches, etc).

Make sure all the windows are clean and attached in the closed position.

Adjust the rearview mirrors for best visibility near the machine. Make sure the horn, backup alarm (if equipped) and all other warning devices are working correctly.

On the drawbar-towed implements, fasten a transport chain of sufficient capacity between the machine drawbar support and implement. Give only enough slack in the chain to permit turning.

Only one instructor must be permitted to ride in the machine cab. Instructor must be seated in the instructor seat with the seat belt fastened.

1.1.15 Operating procedures

The machine will turn with the transmission control lever in the neutral position when the engine is operating and the steering wheel is turned.

Only operate the machine while in the operator's seat. Securely connect the seat belt while operating the machine. Only operate the controls while the engine is operating.

Do a check for the correct operation of all the controls and the protective devices.

As a warning operate the horn two times to tell others in the area to prevent personal injury because of machine movement.

During operation of the machine, record damage and make necessary repairs.

A rollover of the machine can occur when doing work on hills, banks, or slopes. A rollover of the machine can also occur when operating across ditches, ridges, or other unanticipated blockages.

Hold the implement approximately 40 cm (16 in) above the ground level while operating the machine. Do not operate the machine near an overhang, near the edge of a cliff, or near edge of an excavation.

If the machine starts to sideslip on a grade, immediately decrease the load and turn machine downhill.

Be careful to prevent ground conditions which will cause the machine to rollover.

Keep the machine in control. Do not overload the machine more than the capacity.

Make sure the towing devices are sufficient for the work.

Make sure the components on the 3-point linkage are sufficient for the work.

Connect the trailing equipment only to a drawbar or hitch.

Do not straddle a wire cable.

When maneuvering to connect equipment, make sure no personnel are between machine and trailing equipment. Hold up the hitch of trailing equipment to align equipment with drawbar.

Know the maximum dimensions of the machine.

When operating on icy or muddy roads, decrease the travel speed to prevent the loss of control of machine.

After operating in muddy conditions, let sufficient time for tracks to reject unwanted material and moisture before making high speed maneuvers. Belts that are wet and belts that are muddy can impede machine's steering.

Decrease travel speed if the stability of the machine is noticeably reduced.

Slow the machine to a speed that controls the machine when declining a hill.

Use the service brakes if necessary, to control machine speed. Do not coast down a hill with transmission in neutral.

Do not steer machine when crossing ditches. Ditches that are wide and/or ditches that are deep can let the guide blocks sag below midwheels. This can cause the belt to come off.

Do not let passengers anywhere on the machine but on an approved passenger seat. Instructors must have the instructor seatbelt securely connected during all operation.

1.1.16 Parking

Make sure to park the machine on a solid, level surface. Move the drive lever to the neutral position. Wait a time for the park brake to automatically engage or press the park brake switch on the multifunction armrest. Lower all implements to the ground. Move the throttle control lever to low idle and wait a time to let the turbocharger cool. Stop the engine and take the key with you.

1.1.17 Prevent contact with power lines

Prevent Contact with Power Lines - When operating the machine prevent contact with low hanging power lines. Rural areas can have areas where power supply lines can touch part of the machine during usual operation. If a power line touches the machine, move the machine away. If the machine is disabled, make a call for aid. **DO NOT EXIT THE MACHINE UNTIL THE POWER IS DISCONNECTED.**

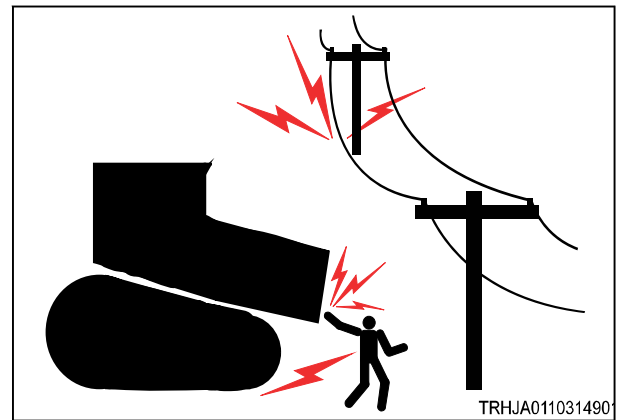


Fig. 6

1.1.18 Operator station

Do not drill holes or weld on the cab rollover protective structure. (ROPS)

Any modifications to the inner operator station must not extend into the operator space.

Any item brought into the cab must not extend into defined operator space. Secure loose items. Objects must not pose an impact hazard in rough terrain or if there is a rollover.

1.1.19 Cut and crush prevention

Support the equipment correctly when performing work below the equipment. Do not rely on the hydraulic cylinders to hold up the equipment. An implement can fall if a control lever is moved or if a hydraulic line breaks.

Never start the machine engine by shorting across the starter solenoid terminals. Machine movement can occur causing runovers .

Never make adjustments while the machine is moving or while the engine is operating.

Whenever there are attachment control linkages, the clearance in the linkage area will change with movement of the attachment.

Stay clear of all rotating parts and all moving parts.

Keep objects away from moving fan blades. The fan blades will throw objects and the fan blades can cut.

Do not use a wire tow cable that is kinked or frayed. Wear gloves when touching wire cable.

When hitting a retainer pin, the retainer pin can fly out causing personal injury. Make sure that there are no people in the area when hitting a retainer pin. To prevent eye injury, wear protective glasses when hitting a retainer pin.

Chips or other debris can fly off objects when hitting the objects. Make sure that others are clear of the area before hitting any object.

1.1.20 Rollover protective structure

Do not make any modifications to the rollover protective structure (ROPS) as this will change protection provided. Do not change structure by welding, cutting, adding weight, or drilling holes into structure.

Any change not specifically authorized by AGCO invalidates AGCO certification for ROPS. The protection offered by ROPS will be impaired if ROPS has structural damage or alteration. Damage to structure can be caused by a turn over or by falling objects.

Do not mount items (fire extinguishers, first aid kits, work lights, etc.) by welding brackets or drilling holes in ROPS. See dealer for mounting guide lines.

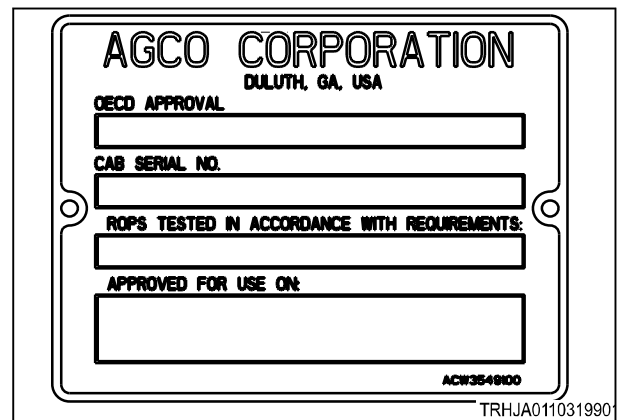


Fig. 7

1.1.21 Burn prevention

Do not touch any part of an operating engine. Other components such as the transmission, the axles and the oil reservoir can also be hot. Let the engine cool before performing any maintenance on the engine. Release all pressure in air, oil, lubrication, fuel and cooling systems before disconnecting any line fittings or related items.

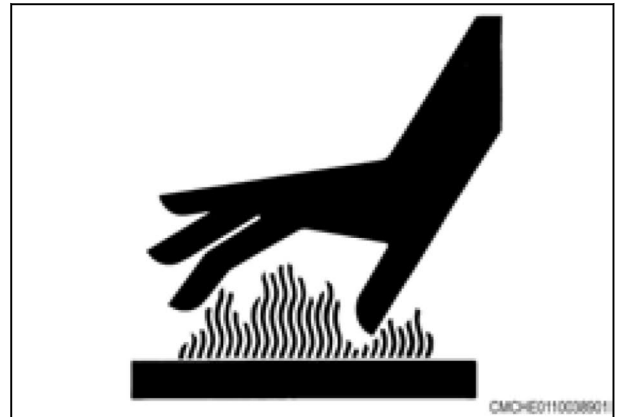


Fig. 8

1.1.22 Coolant

When the engine is at operating temperature, the engine coolant is hot. The coolant is also under pressure. The radiator and all the lines to the heater or engine contain hot coolant.

Any contact with hot coolant or with the steam can cause severe burns. Allow the cooling system components to cool before the cooling system is drained.

Check the coolant level only after the engine has been stopped.

Make sure the filler cap is cool before removing. The filler cap must be cool enough to touch with a bare hand. Remove the filler cap slowly to relieve the pressure.

The cooling system conditioner contains alkali. Alkali can cause personal injury.

Do not allow alkali to contact skin, eyes or mouth.



Fig. 9

1.1.23 Oils

Pressurized hot oil and hot components can cause personal injury. Do not allow hot oil to contact skin. Do not allow hot components to contact skin.

Remove the hydraulic tank filler cap only after the engine has been stopped.

The filler cap must be cool enough to touch with a bare hand. Follow the standard procedure in this manual to remove the hydraulic tank and transmission filler caps.

1.1.24 High pressure lines

Do not bend or strike the high pressure lines. Do not install any lines that are bent or damaged.

Repair any loose or damaged lines. Leaks can cause fires. Consult your dealer for repair or for replacement parts.

**DANGER:**

Diesel fuel or hydraulic fluid under pressure can penetrate the skin or eyes. This can cause serious personal injury, blindness, or death.

1.1.25 Fluid penetration

Always use a board or cardboard when checking for a leak. Leaking fluid under pressure can penetrate the body tissue. Fluid penetration can cause serious injury and possible death. A pin hole leak can cause severe injury. If fluid is injected into the skin, get treatment immediately. Get treatment from a doctor familiar with this type of injury.

Check the lines, the tubes and the hoses carefully. Do not use your bare hand instead, use a board or cardboard to check for leaks. Tighten all connections to the recommended torque.

Replace the hose if any of the following conditions are present:

- End fittings are damaged or leaking.
- Outer coverings are rubbed or cut.
- Wires are showing.
- Outer coverings are ballooning.
- The flexible part of the hose has a kink.
- Outer coverings have embedded armoring.
- The end fittings are displaced.

IMPORTANT: *Take care to contain fluids during the performance of the inspection, the maintenance, the testing, the adjusting, and the repair of the machine. Have a suitable container large enough ready to collect the fluid before opening any compartment or disassembling any component containing fluids. See the local regulations and mandates when discarding fluids.*

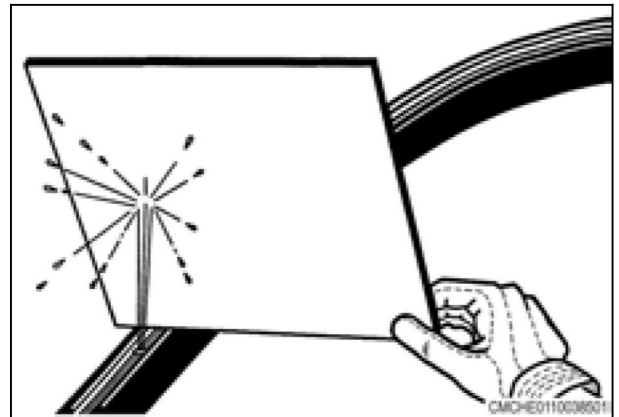


Fig. 10

1.1.26 Batteries

A lead acid battery generates flammable and explosive gases. Keep sparks and flames away from the battery.



WARNING: Sulfuric acid in battery electrolyte is poisonous.

The acid is strong enough to burn skin, eat holes in clothing and cause blindness if got into eyes.

If acid contacts skin or clothing, flush with water immediately. If acid contacts eyes get immediate medical aid.

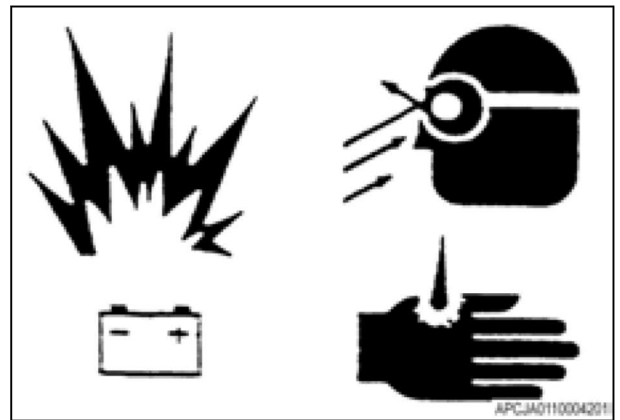


Fig. 11

Wash hands after touching batteries and connectors.



WARNING: Batteries contain electrolyte which is an acid that can cause personal injury.

Do not let the electrolyte contact the skin or eyes.

Always wear protective glasses for servicing batteries.



Fig. 12

Never check battery charge by placing a metal object across the terminal posts. Use a voltmeter or a hydrometer.



WARNING: Gases from a battery can explode.

Incorrect jumper cable connections can cause an explosion causing an injury.

Keep open flames or sparks away from the top of the battery. Do not smoke in the battery charging areas. To prevent an explosion, never charge a frozen battery.



Fig. 13

1.1.27 Exhaust fumes

Always work in a correct ventilated area.

Engine exhaust fumes can cause sickness or death. If necessary to run engine in a closed area, use correct equipment to safely remove exhaust fumes from area.

Always open the doors and get outside air into area.



Fig. 14

1.1.28 Noise prevention

Wear proper hearing protective devices such as earmuffs or earplugs to prevent loss of hearing due to high noise levels.

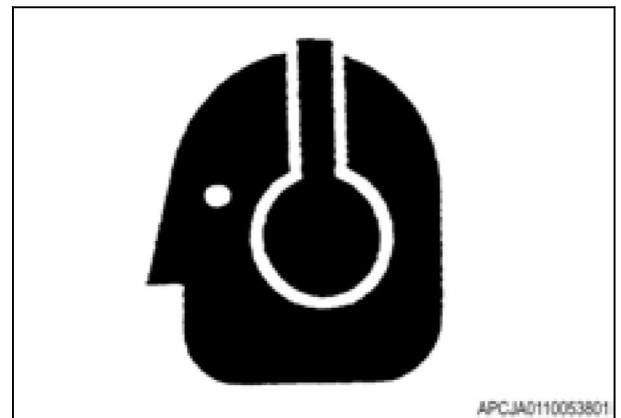


Fig. 15

1.1.29 Fire and explosion prevention

Use caution when refueling a machine. Do not smoke while refueling and do not refuel near open flames or sparks. Always stop engine before refueling. Fill fuel tank outdoors.

All fuels, most lubricants, and some coolant mixtures are flammable.

Flammable fluids leaking or spilled onto hot surfaces or electrical components can cause a fire.

Fire may cause personal injury and property damage.

Remove all flammable materials such as fuel, oil, and debris from machine.

Do not let any flammable materials to accumulate on machine.

Store fuels and lubricants in correctly identified containers away from not approved persons. Store rags with oil and any flammable materials in protective containers.

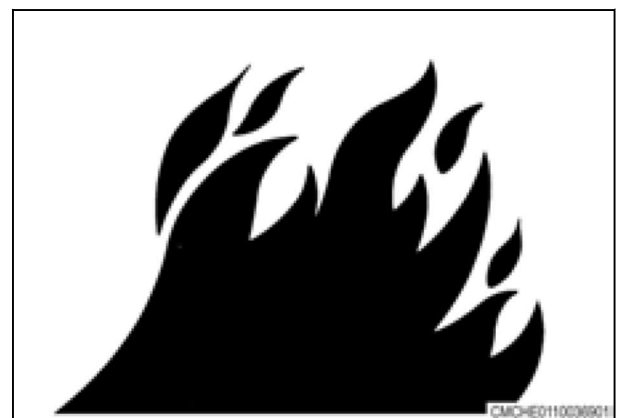


Fig. 16

1. Safety

Do not smoke in areas used for storing flammable materials.

Do not operate machine near any flame.

Do not weld on lines or tanks that contain flammable fluids. Do not flame cut lines or tanks containing flammable fluid. Clean any such lines or tanks fully with a nonflammable solvent before welding or flame cutting.

Check all electrical wires daily. Repair any wires loose or frayed before operating machine. Clean and tighten all electrical connections.

Dust generated from repairing nonmetallic hoods or nonmetallic fenders can be flammable and/or explosive. Repair such components in a well ventilated area away from open flames or sparks.

Inspect all lines and hoses for wear or for deterioration and replace if necessary.

Route hoses correctly. Lines and hoses must have sufficient support and secure clamps. Tighten all connections to recommended torque.

1.1.30 Fire extinguisher

An optional (1) bracket can be installed on the right front frame rail. The bracket holds a 4.5 kg fire extinguisher. Make sure that all clamps, guards, and heat shields are installed correctly. Correct installation prevents vibration, abrasions and too much heat during the machine operation.

Do not weld the bracket onto the cab ROPS frame to install the fire extinguisher. Do not drill holes in the cab ROPS frame to attach the fire extinguisher.

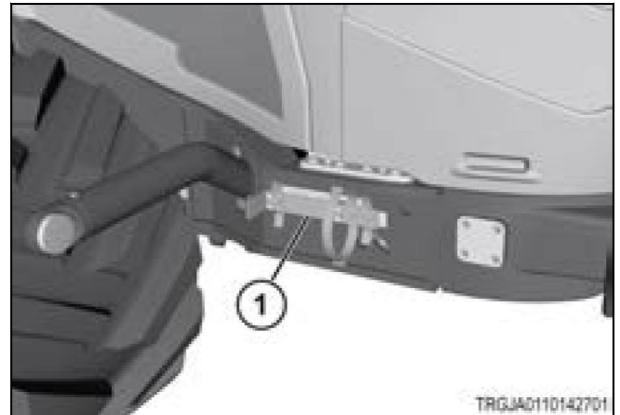


Fig. 17

Make sure that a fire extinguisher (1) is available and know the operation. Examine and service the fire extinguisher regularly. Obey the recommendations on the instruction plate.

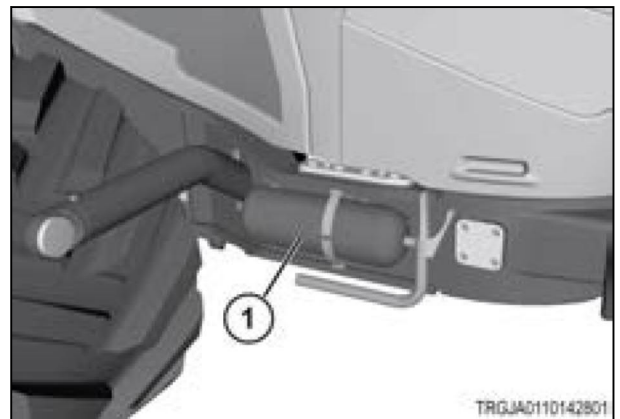


Fig. 18

1.1.31 Public road transportation

Always walk around and visually examine the machine before moving on a public road. As a warning to others in the area, honk the horn two times before starting engine. Do a check for damage and/or defective components that can make a dangerous condition. Make sure all machine systems operate correctly including (but not limited to):

- front road lamps
- tail and brake lamps
- amber hazard lights

- parking brake
- horn
- windshield wiper and washer
- rear view mirrors
- etc.

Repair or replace a component not in correct operating order.

Do not drive at a speed causing machine to lose control.

Obey all traffic rules. Operate the machine with hazard lights on, unless prevented by law. The operation of work lamps while driving on public roads is prohibited. Use of road lamps while moving on public roads is the operator's responsibility.

NOTE:

When the Speed Indication Symbol (SIS) is installed in the rear window, be sure to close the rear window when transporting the machine on the road.



CAUTION:

The operator must always use caution when driving on public roads. In addition, a bystander must be used to alleviate restricted field of vision associated with the exhaust system of the tractor. A bystander is required at yard exits, road merges and intersections to advise the driver when it is safe to proceed.

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