Click here to get the complete manual

INTRODUCTION

With correct maintenance and proper use, Gehl skid-steer loaders will give years of dependable service. This service manual is intended to be a guide in the assembly and disassembly, installation and removal, adjustment and testing, troubleshooting and replacement of components that together make up the Gehl SL7610 and SL7810 skid-steer loaders.

IMPORTANT

For SL7710 (EU) service information, follow procedures for SL7610 skid-steer loaders, except where noted separately.

In many of the procedures found within, the installation steps are the exact opposite of the removal steps and vice versa, and therefore, the opposite procedure is not written. Instead, a note to reverse the procedure will be stated. This reduces redundancy and excessive pages in the manual. In cases though, where the assembly and disassembly or removal and installation procedures differ and additional steps or safety concerns are paramount, the entire reverse procedure will be written out to include the new information.

The Table of Contents and Index can be used to make the procedure you need to find an easier process. Also, there are black tabs extending off the pages highlighting the chapters for those who prefer to thumb through the manual. Many schematics, photographs, and line art drawings are used to help perform the necessary repairs, tests, or adjustments that the 7010 Series skid-steer loader needs to keep it in good running condition.

If you have any additional questions, please contact your authorized Gehl dealer or call the Gehl Service Department for assistance.

TABLE OF CONTENTS

Specifications	Page 1-1
Specifications	1-1
Tire Options	1-1
Buckets and Capacities	1-1
Dimensional Specifications	1-2
Safety	Page 2-1
General Information	2-1
Signal Words	2-1
Additional Safety Reminders	2-1
Mandatory Safety Shutdown Procedure	2-2
Liftarm Support Device	2-3
Liftarm Support Device Engagement	2-3
Liftarm Support Device Disengagement	2-4
Rollover Protective Structure (ROPS) - Raising	2-4
Rollover Protective Structure (ROPS) - Lowering	2-5
Relieving Hydraulic Pressure	2-6
Loader Raising Procedure	2-7
Loader Lowering Procedure	2-7
Lubrication	Page 3-1
General Information	3-1
Hydraulic Oil Reservoir	3-2
Crankcase Oil	3-2
Chaincases	3-3
Grease Fitting Locations	3-3
Cooling System Drain Procedures	
Mainframe	Page 4-1
Introduction	4-1
Engine Access Covers - Removal and Installation	4-1
Rollover Protective Structure (ROPS) Removal and Installation	4-4
Seat Removal and Installation	4-5
Seat Slide Replacement	4-5
Air Duct Removal and Installation	4-6
Air Duct Louver Replacement.	4-6

	Rollover Protective Structure (ROPS) Rear window Removal and Installation	4-6
	Restraint Bar Removal and Installation	4-7
	Gehl All-Tach™ Hitch Removal and Installation	4-9
	Liftarm Removal and Installation	4-11
	Rear Link Removal and Installation	4-17
	Timing Link Removal and Installation	4-18
	Links and Liftarm Bushing Replacement	4-19
	Control Console Removal and Installation	4-20
	Floor Cover Removal and Installation	4-21
	Crossmember Removal and Installation	4-22
	Fuel Sensor Removal and Installation	4-23
	Tailgate - Rear Grille Removal and Installation	4-24
	Tailgate Latch Removal and Installation.	4-24
WI	neel Drives	Page 5-1
	Introduction	
	Drive Chain Adjustment	5-2
	Axle Housing Assembly Removal and Installation.	5-3
	Drive Chain Removal and Installation	5-4
	Axle and Wheel Bearing Disassembly and Assembly	5-6
Со	entrols	Page 6-1
	Introduction	
	Control Handle Removal and Installation	
	Control Handle Position Adjustment	
	Control Handle Tracking Adjustment, Traction Controls	
	T-Bar Control Handle Assembly	6-9
	Hand/Foot Control Handle Assembly	6-11
	Dual Hand Control Handle Assembly	6-12
	Pivot Tube Removal and Installation - T-Bar, Hand/Foot and Dual Hand	6-16
	Neutral Centering Device Adjustment	
	Control Arm Assembly Removal and Installation	6-19
	Lift/Tilt Control Removal and Installation	6-20
	Lift/Tilt Control Adjustment	6-23
	Auxiliary Hydraulics Cable Removal and Installation - T-Bar and Dual Hand	(2(
		6-26
	Auxiliary Hydraulics Cable Adjustment - T-Bar and Dual Hand	
	Auxiliary Hydraulics Cable Adjustment - T-Bar and Dual Hand	6-27

All-Tach is a trademark of the Gehl Company.

Foot Throttle Removal and Installation - T-Bar and Dual Hand	6-32
Hand Throttle Tension Adjustment	6-33
Hand Throttle Adjustment - Hand/foot	6-34
Foot Throttle Adjustment - T-Bar and Dual Hand	6-35
Hydrostatic System	Page 7-1
Introduction	7-1
Troubleshooting Guide	
Charge Pressure Test and Adjustment	7-7
Hydrostatic Pump Relief Valves	7-8
Hydrostatic Pump Removal and Installation	7-8
Hydrostatic Pump Drive Coupling Removal and Installation	7-10
Drive Motor Removal and Installation	7-11
Hydraulic System	Page 8-1
Introduction	
Troubleshooting Guide	
Pressure Tests, System and Load-Sense Standby	
Tilt Cylinder Test.	
Self-Leveling Valve Test	
Lift Cylinder Test	
Solenoid Valve Test - Safety Lock, Brake and Two-Speed	
Hydraulic Oil Filter Element Replacement	
Tilt Cylinder Removal and Installation	
Lift Cylinder Removal and Installation	
Lift and Tilt Cylinder Disassembly and Assembly	8-24
Load-Sense Axial Piston Pump Removal and Installation	
Self-Leveling Valve Removal and Installation	8-28
Self-Leveling Valve Adjustment	8-30
Safety Lock Valves - Removal and Installation	8-31
Lift, Tilt and Safety Lock Valves - Disassembly and Assembly	8-33
Control Valve Removal and Installation	8-33
Control Valve Disassembly and Assembly	8-38
Load-Sense Shuttle Cleaning Procedure	8-39
Control Valve Spool Seal Replacement	8-40
Anti-Cavitation Relief Valve Removal and Installation	8-41
Spool Lock Solenoid Removal and Installation	8-42
Hydraulic Tank Removal and Installation	8-43
Hydraulic Accumulator Removal and Installation	8-44
Hydroulic System Schemotic 7010 Series	8 16

Electrical System	Page 9-1
Introduction	9-1
Description of Operation - Right and Left Instrument Panels	9-1
Troubleshooting Guide	9-3
Module and Relay Test and Operation	9-7
Interlock Control Module Truth Table	9-13
Seat Switch Removal and Installation	9-15
Restraint Bar Switch Removal and Installation	9-17
Engine Disconnect Switch - Remote Battery Terminal Removal and Installa	ation9-18
Front Work Light Bulb Replacement	9-20
Rear Work Light Bulb Replacement	9-20
Dome Light Bulb Replacement	9-21
Electrical System Schematic	9-22
Engine	Page 10-1
Introduction	10-1
Introduction	
	10-1
Troubleshooting Guide	
Troubleshooting Guide	
Troubleshooting Guide	
Troubleshooting Guide Oil Filter Element Removal and Installation Air Cleaner Assembly Removal and Installation Air Filter Element Removal and Installation.	
Troubleshooting Guide Oil Filter Element Removal and Installation Air Cleaner Assembly Removal and Installation Air Filter Element Removal and Installation. Battery Removal and Installation	
Troubleshooting Guide Oil Filter Element Removal and Installation. Air Cleaner Assembly Removal and Installation Air Filter Element Removal and Installation. Battery Removal and Installation Starter Removal and Installation	
Troubleshooting Guide Oil Filter Element Removal and Installation. Air Cleaner Assembly Removal and Installation Air Filter Element Removal and Installation. Battery Removal and Installation Starter Removal and Installation Exhaust Assembly Removal and Installation	
Troubleshooting Guide Oil Filter Element Removal and Installation. Air Cleaner Assembly Removal and Installation Air Filter Element Removal and Installation. Battery Removal and Installation Starter Removal and Installation Exhaust Assembly Removal and Installation Fan Belt Adjustment	
Troubleshooting Guide Oil Filter Element Removal and Installation. Air Cleaner Assembly Removal and Installation Air Filter Element Removal and Installation. Battery Removal and Installation Starter Removal and Installation Exhaust Assembly Removal and Installation Fan Belt Adjustment Cooler Radiator Removal and Installation	10-1
Troubleshooting Guide Oil Filter Element Removal and Installation Air Cleaner Assembly Removal and Installation Air Filter Element Removal and Installation. Battery Removal and Installation Starter Removal and Installation Exhaust Assembly Removal and Installation Fan Belt Adjustment Cooler Radiator Removal and Installation Fan Shroud Removal and Installation	10-1

SPECIFICATIONS

	7610/7710	7810
Make of Engine	Perkins	Perkins (Turbo)
Model	1104C-44	1104C-E44T
Fuel	Diesel	Diesel
Displacement	269 CID (4,41 L)	269 CID (4,41 L)
Horsepower - Net	86 hp (64 kW) @ 2400 rpm	115 hp (86 kW) @ 2400 rpm
Peak Torque	223 lbf-ft (302 N•m) @ 1400 rpm	291 lbf-ft (394 N•m) @ 1400 rpm
*SAE Rated Operating Load	3400 lbs (1542 kg)	3675 lbs (1724 kg)
Operating Weight	10180 lbs (4618 kg)	10260 lbs (4654 kg)
Shipping Weight	8980 lbs (4073 kg)	9060 lbs (4110 kg)

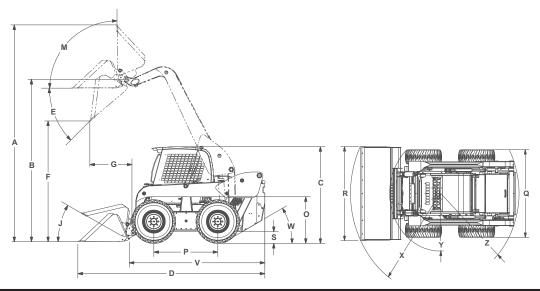
Specifications below apply to all 7610, 7710 and 7810 models Capacities			
Chaincases (each)	3 US gal (11,4 L)		
Engine Oil	8.9 US qts (8,4 L)		
Fuel Tank	28.9 US gal (109,4 L)		
Electrical			
Battery	12 volt DC with 950 CCA		
Starter	12 volt DC (3 kW)		
Alternator	85 A		
Hyd	raulic System		
Hydraulic System Pressure	3300 psi (228 bar)		
Standard Auxiliary Flow Rate (Single)	2-29 gpm (8-110 L/min)		
High-Flow Auxiliary Flow Rate (Dual)	40 gpm (151 L/min)		
Travel Speed - Single Speed	0 to 8.0 mph (0 to 13 km/h)		
Travel Speed - Two-Speed (optional on 7610/7710)	0 to 14 mph (0 to 22,5 km/h)		

Tire Options		
14 x 17.5 - 14 ply	Foam-Filled tires	
14 x 17.5 - 14 ply	High Clearance Flotation tires	
14 x 17.5 - 14 ply	Severe Duty tires	
15 x 17.5 - 14 ply	Foam-Filled tires - Severe Duty	
33 x 15.5 x 16.5 - 12 ply	Extra Wide Heavy Duty tires	
12 x 35	Solid Rubber tires	

Buckets and Capacities				
Width - inches (millimeters) Bucket Description Capacity (Heaped)				
84 inches (2083 mm)	Dirt/Construction	22.0 cubic feet	0,62 cubic meters	
84 inches (2083 mm)	Dirt/Construction	28.0 cubic feet	0,79 cubic meters	
90 inches (2286 mm)	Dirt/Construction	29.3 cubic feet	0,83 cubic meters	
48 inches (1219 mm)	Pallet Fork	N/A N/A		

^{*}Operating load rated with a 84 inch (2134 mm) dirt/construction bucket in accordance with SAE J818.

PRINTED IN USA 1-1 917033/AP0704



Dimensional Specifications		7610 Models 0.81 cu. yd. bkt. w/ 14 x 17.5 tires		7810 Models 1.0 cu. yd. bkt. w/ 14 x 17.5 tires	
		inches	millimeters	inches	millimeters
A	Overall operation height - fully raised	185.5	4719	187.8	4770
В	Height to hinge pin - fully raised	142	3607	142	3607
C	Overall height - top of ROPS	81	2057	81.1	2060
D	Overall length - bucket down	159	4039	161	4089
E	Dump angle @ full height	38°		38°	
F	Dump height	109.5	2781	107	2718
G	Dump reach - bucket (full height)	36.8	935	38.2	970
J	Rollback at ground	28.5°		28.5°	
M	Rollback angle at full height	85°		85°	
О	Seat-to-ground height	41	1041	41	1041
P	Wheelbase - nominal	55	1397	55	1397
Q	Overall width - less bucket	81	2057	81	2057
R	Overall bucket width	84	2134	84	2134
S	Ground clearance to chassis (between wheels)	9.1	231	9.1	231
U	Maximum back grading angle	81.5°		81.5°	
V	Departure angle	21°		21°	
W	Clearance circle - front (with bucket)	98.5	2502	101.7	2583
X	Clearance circle - front (less bucket)	60.6	1539	60.6	1539
Y	Overall length (less bucket)	30°		30°	
Z	Clearance circle - rear	80.5	2045	80.5	2045

917033/AP0704 1-2 PRINTED IN USA