SPECIFICATIONS

Model	R105 / 1050R
Engine Make	Yanmar
Engine Model (DPF Models)	3TNV88C-KMS
Engine Model (Non-DPF Models)	3TNV88-BKMS
Fuel	Diesel
Displacement	100 CID (1,64 L)
Horsepower - Net (DPF Models)	35 hp (26 kW) @ 2800 rpm
Horsepower - Net (Non-DPF Models)	35 hp (26 kW) @ 2600 rpm
Peak Torque (DPF Models)	80 lbf-ft. (109 N•m) @ 1820 rpm
Peak Torque (Non-DPF Models)	80 lbf-ft. (109 N•m) @ 1200 rpm
Rated Operating Capacity	1050 lbs. (476 kg)
Operating Weight	4000 lbs. (1814 kg)
Shipping Weight	3515 lbs. (1594 kg)
Capacities	**Capacities**
Engine Oil	7.6 US qts. (7,2 L)
Fuel Tank (DPF Models)	9.5 US gal. (36 L)
Fuel Tank (Non-DPF Models)	10.3 US gal. (39 L)
Chaincase (each)	8.0 US qts. (7,6 L)
Hydraulic Reservoir	8.0 US gal. (30 L)
Engine Coolant	8.0 US qts. (7,6 L)
Electrical System	**Electrical**
Battery	12-V DC, Group 34, 800 CCA, 110 Reserve
Starter	12-V DC (1,7 kW)
Alternator (DPF Models)	55 A
Alternator (Non-DPF Models)	40 A
Hydraulic System	**Hydraulic System**
Hydraulic System Pressures	2750 PSI (190 bar)
Standard Auxiliary Flow Rate	16.5 gal/min (62 L/min)
Travel Speed (with standard tire)	0 to 5.5 mph (0 to 9,0 km/h)
Tire Options	**Tire Options Description**
8.50 x 15 Heavy-Duty 8-Ply	Titan
27 x 8.50-15 Heavy-Duty 8-Ply	Titan
10.50 x 15 Heavy-Duty 8-Ply	Titan
27 x 10.50 Heavy-Duty 8-Ply	Titan
10 x 16.5 Heavy-duty 8-Ply	Titan
7 x 15 SS Narrow	Titan
Buckets and Capacities	
Width - Description	**Capacity (Heaped)**
36 inches (914 mm) - Dirt/Construction	5.3 cubic feet ; 0,15 cubic meters
44 inches (1118 mm) - Dirt/Construction	7.4 cubic feet ; 0,21 cubic meters
48 inches (1219 mm) - Utility/Snow	9.8 cubic feet ; 0,28 cubic meters
15.75-19.68-24 inches (400-500-610 mm) Pallet	Not Applicable

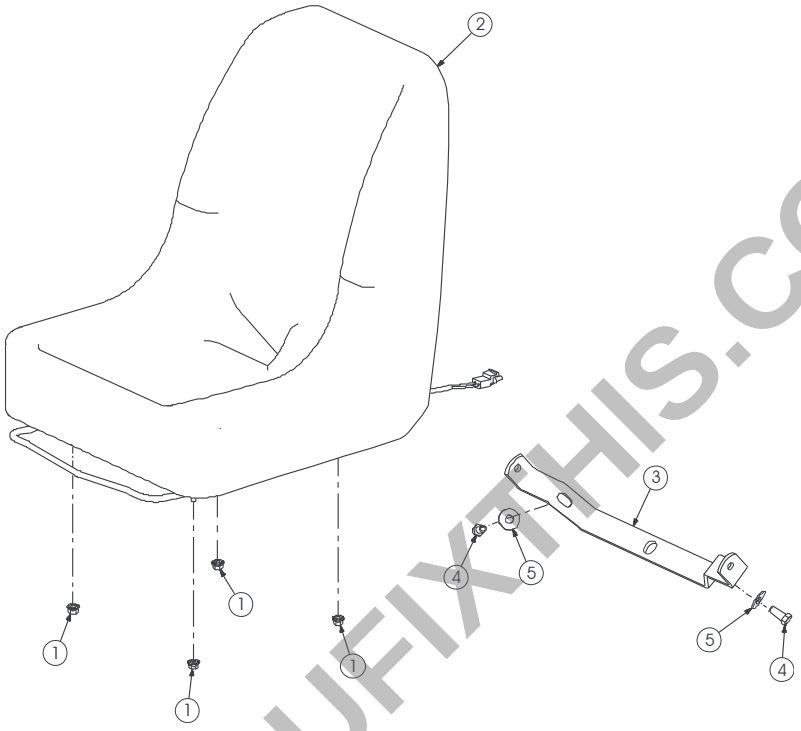
*Operating capacity rated with a 8.50-15 tires, 10.3 cubic foot (0.3 m^3) dirt/construction bucket in accordance with SAE J818, SAE J732 and ISO 14397-1.

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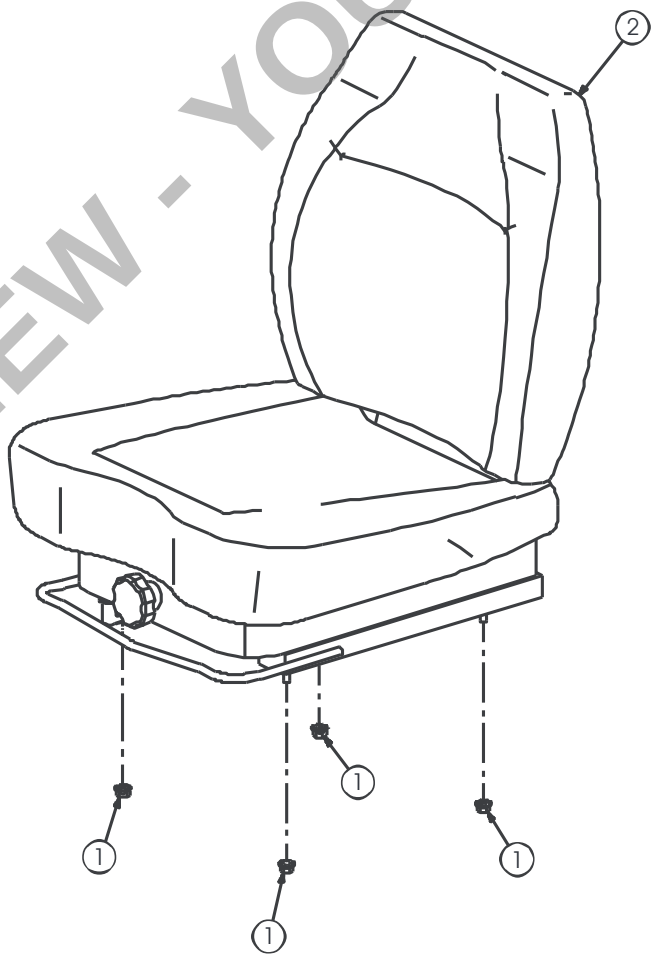
Seats - Standard and Suspension

Standard Seat



1 NUT/HEX WHIZLOCK
2 SEAT
3 BRACKET/SEAT BELT
4 SCREW/CAP
5 WASHER/FLAT

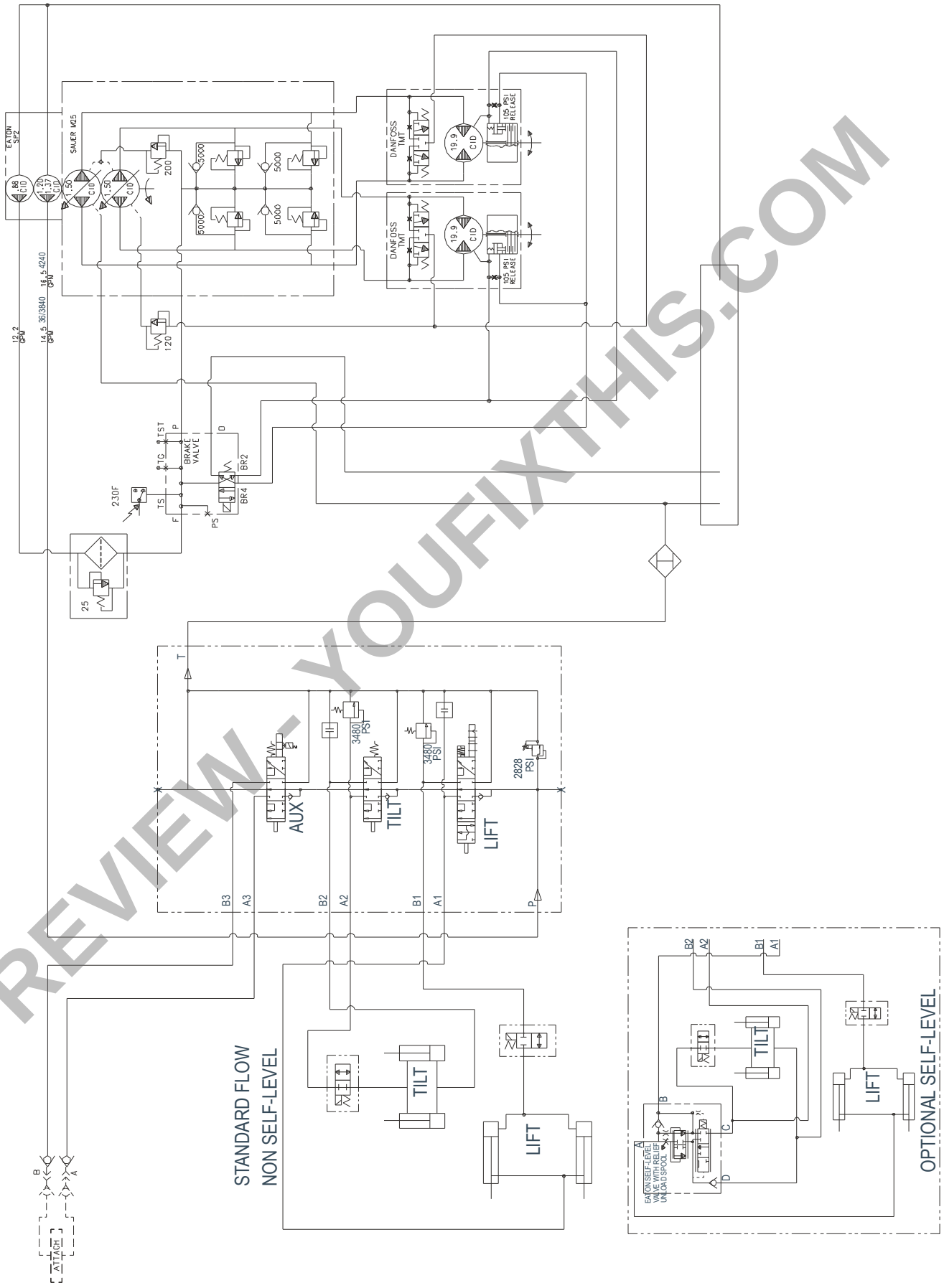
Suspension Seat



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Hydrostatic/Hydraulic Schematic - Gehl R105



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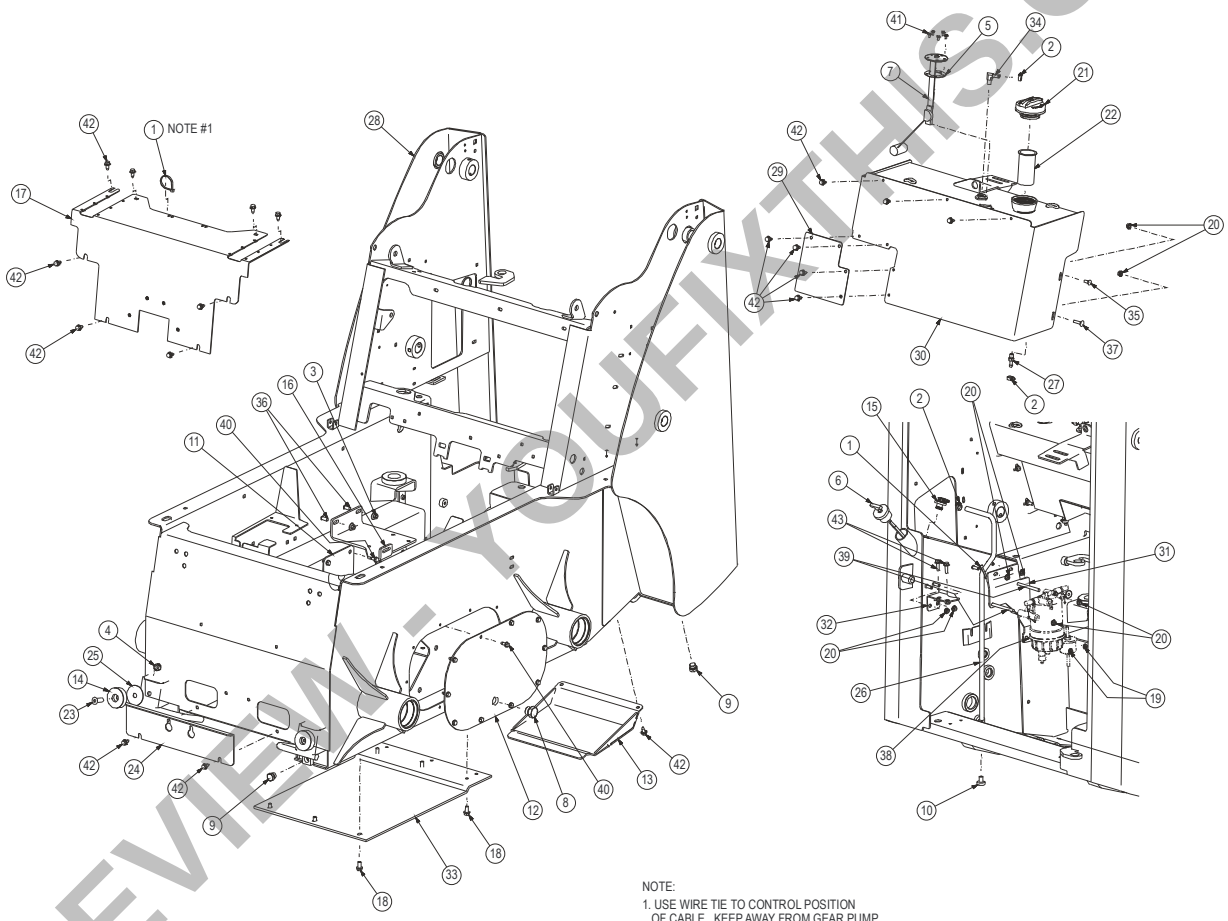
Introduction

Gehl R105 and Mustang 1050R model skid-steer loaders have a welded steel chassis. Maintenance, service and repair may be performed through standard access panels.

Two side chaincases provide mounting for the drive motors and for the front and rear axles. The side cases also serve as sealed housings for the drive chains and sprockets. Oil is used inside these cases to ensure the chains always receive proper lubrication.

The lift arm and the lift and tilt cylinders are mounted with pivot pins. Capscrews are used to secure the pivot pins. A Rollover Protective Structure/Falling Object Protective Structure (ROPS/FOPS) is standard for operator safety, and both the seat and restraint bar include interlock switches.

Mainframe (Chassis) - DPF Models



1	TIE/CABLE	16	PLATE/VALVE MOUNT	31	PLATE/FUEL SEPARATOR
2	CLAMP/HOSE	17	KICK PLATE	32	FITTING/90
3	NUT/FLLSUF	18	THWH TR	33	PAN/BELLY
4	LOCKNUT	19	LN FL SERR	34	FITTING/90
5	FUEL SENDER GASKET	20	LN FL SERR	35	BOLT/CARRIAGE
6	CAP ASSEMBLY-FILLER	21	CAP/FUEL FILLER	36	BOLT/CARRIAGE
7	SENDER	22	STRAINER/FUEL	37	BOLT/CARRIAGE
8	PLUG	23	CS FLAT HD	38	BOLT/CARRIAGE
9	PLUG	24	COVER	39	SCREW/CAP
10	FILTER/VENT	25	SHIM	40	THWH TC USL
11	COVER/AXLE ACCESS	26	HOSE /FUEL	41	HWHMS
12	COVER/CHAINCASE ACCESS	27	FITTING/STRAIGHT	42	HWHTRS TAP/R
13	COVER OIL PAN	28	CHASSIS	43	SCREW/CAP
14	DOWN STOP	29	PLATE/COVER		
15	VENT/REMOTE	30	FUEL TANK		

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Engine Access Cover - Removal and Installation

WARNING

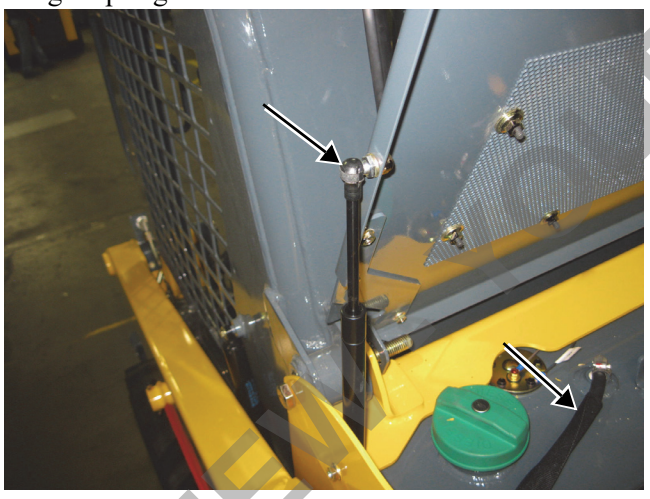
BEFORE beginning this service procedure, perform the following SAFETY procedure:

■ Shut off the engine.

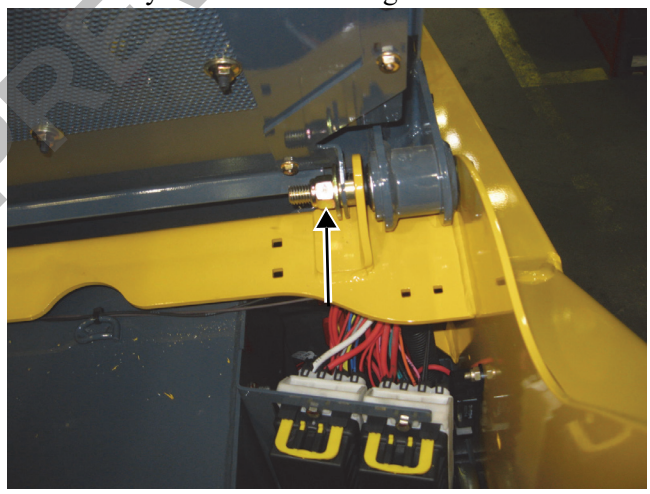
(For detailed instructions, refer to the *Safety* chapter of this manual.)

Removal Procedure

1. Open the engine access cover and lock open the rear grille.
2. Disconnect the gas spring from the engine access cover by removing the gas spring clip at the access cover end of the gas spring, and then pulling the gas spring off the ball stud on the access cover.



3. Holding up the engine cover, remove the hardware securing the access cover to the ROPS/FOPS assembly and remove the engine cover.



Installation Procedure - Follow all warnings first, then reverse the removal steps.

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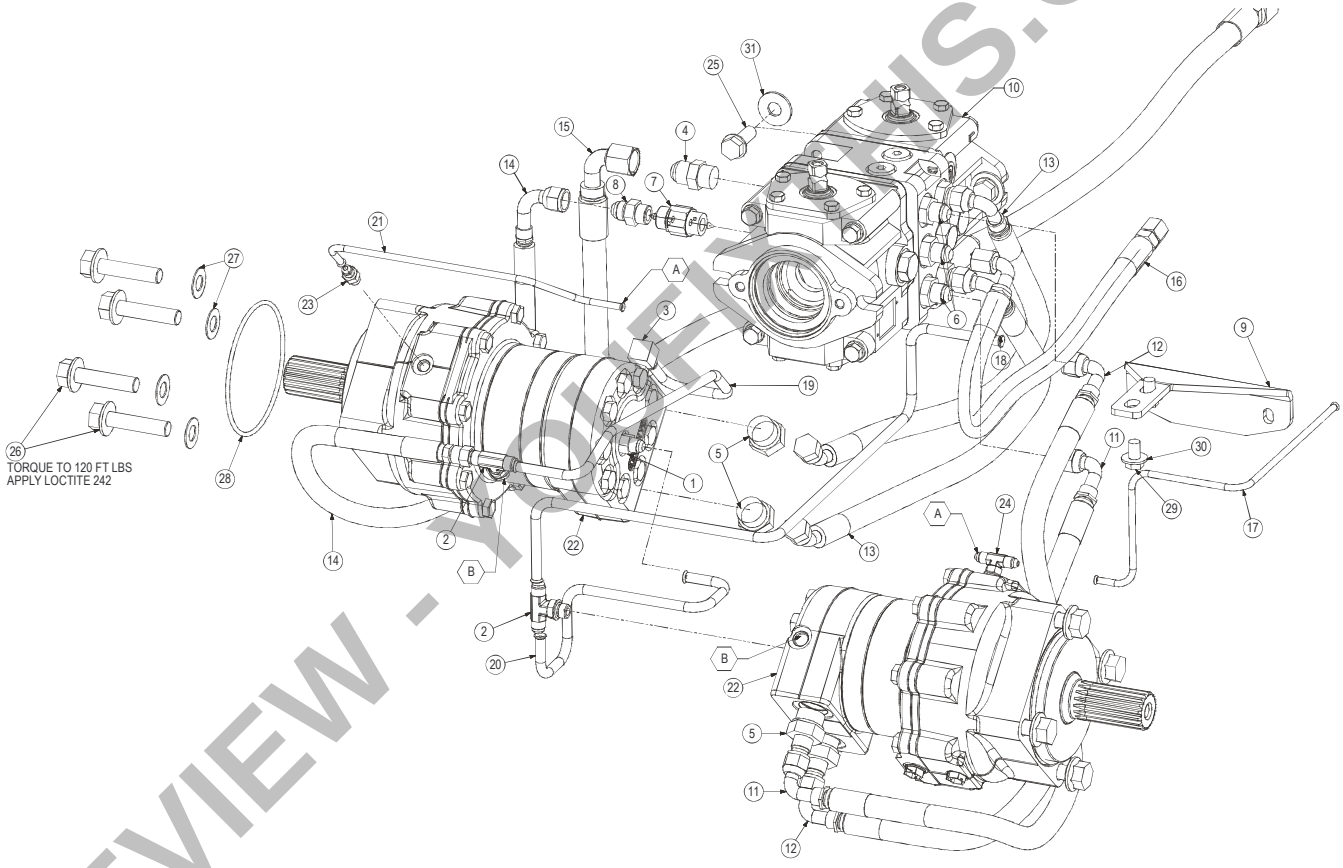
Introduction

This chapter covers troubleshooting, testing, removal, installation, and adjustment procedures for the tandem pump system on Gehl R105 and Mustang 1050R model skid-steer loaders.

A hydrostatic pump assembly coupled to the engine provides power to two fixed-displacement hydrostatic drive motors. The motors drive the wheels on each side of the loader through a chain-and-sprocket system. The pumps and motors are controlled individually, allowing complete flexibility in forward, reverse, gradual, pivot and spin turns.

For detailed information on pump and motor internal repairs, consult the Gehl-Mustang Service Department or the component manufacturer's service manual. Related hydraulic components are covered in the *Hydraulic System* chapter of this manual.

Hydrostatic Pump Assembly and Drive Motors

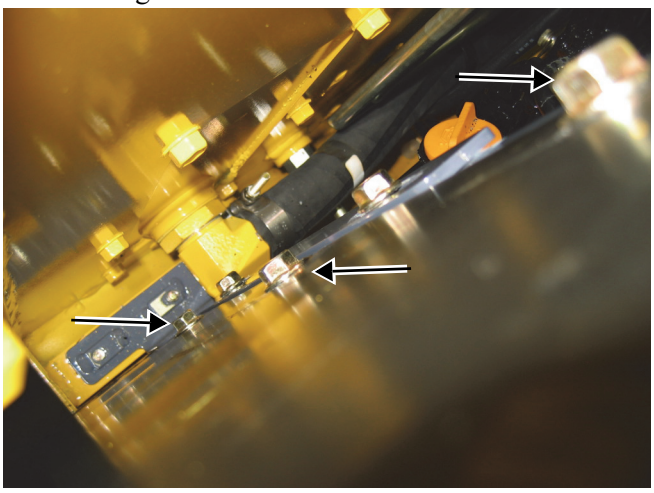


1 FITTING/STRAIGHT
2 FITTING/TEE
3 FITTING/90°
4 FITTING/STRAIGHT
5 FITTING/STRAIGHT
6 FITTING/STRAIGHT
7 FITTING/STRAIGHT
8 VALVE/RELIEF
9 SUPPORT/PUMP
10 PUMP/TANDEM
11 HOSE
12 HOSE
13 HOSE
14 HOSE
15 HOSE
16 HOSE
17 TUBE/MOTOR BRAKE
18 TUBE/BRAKE VALVE
19 TUBE ASSEMBLY/MOTOR PORT
20 TUBE/MOTOR END PORT
21 TUBE/MOTOR SIDE PORT
22 MOTOR/DRIVE
23 FITTING/STRAIGHT
24 FITTING/TEE
25 SCREW/CAP FLANGED
26 SCREW/CAP FLANGED
27 WASHER/SEAL
28 O-RING
29 SCREW/CAP
30 WASHER/FLAT
31 WASHER/FLAT

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7. Remove three locking capscrews on each side securing the radiator/oil cooler tab to the shroud.



8. Using a suitable hoist of adequate capacity and a positive locking mechanism able to support the radiator/oil cooler or equivalent, remove the radiator/oil cooler from the skid-steer loader.

Installation Procedure - Follow all warnings first, then reverse the removal steps.

WARNING



NEVER use your hands to search for hydraulic fluid leaks. Use a piece of cardboard or paper. Escaping fluid under pressure can be invisible and penetrate the skin causing serious injury. If any fluid is injected into your skin, see a doctor at once. Injected fluid MUST be surgically removed by a doctor familiar with this type of injury or gangrene may result.

WARNING



ALWAYS wear safety glasses when checking for hydraulic fluid leaks. Escaping fluid under pressure can be invisible and can cause permanent eyesight damage if safety glasses are not worn.

9. ALWAYS check for hydraulic fluid leaks after installing any components of the hydraulic system.

Fan Shroud and Support Brackets Removal and Installation

Removal Procedure

WARNING

BEFORE beginning this service procedure, perform the following SAFETY procedure:

■ Shut off the engine and allow to cool.

(For detailed instructions, refer to the *Safety* chapter of this manual.)

WARNING

DO NOT attempt to service any part of radiator/oil cooler system until engine has been allowed to cool. Serious injury may result from high temperature oil or water coolant or high pressure.

1. Remove the hydraulic reservoir drain plug and drain the hydraulic oil into a suitable container. Refer to the procedure in the *Lubrication* chapter.

NOTE: Hydraulic oil lines should be plugged after disconnecting to prevent contaminants from entering the hydraulic system. If the hydraulic lines are plugged after disconnecting to prevent leakage, it should not be necessary to drain the hydraulic reservoir.

2. Remove the radiator/oil cooler per the procedure in this chapter.

3. Underneath the skid-steer loader there is space to access and remove two locknuts securing the

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General Information

The above safety alert symbol means: ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! It stresses an attitude of "safety awareness" and can be found throughout this service manual and on decals on the machine.

Before operating or working on this machine, read and study the following safety information. In addition, be sure that everyone who operates or works on this equipment is familiar with these safety precautions. It is essential to have competent and careful operators, who are not physically or mentally impaired, and who are thoroughly trained in the safe operation of the machine and the handling of loads. It is recommended that the operator be capable of obtaining a valid motor vehicle operator's license.

The use of skid-steer loaders is subject to certain hazards that cannot be eliminated by mechanical means, but only by exercising intelligence, care and common sense. Such hazards include, but are not limited to, hillside operation, overloading, instability of the load, poor maintenance and using the equipment for a purpose for which it is not intended or designed.

Both Gehl and Mustang Company ALWAYS consider the operator's safety when designing machinery and guards exposed moving parts for the operator's protection. However, some areas cannot be guarded or shielded in order to assure proper operation. The Operator's Manual and the decals on the machine warn of additional hazards and should be read and observed closely.

These topics in the Safety chapter of the service manual include procedures, which, when followed, will allow safe performance of service procedures: Mandatory Safety Shutdown Procedure, Lift Arm Support Device, Roll-Over Protective Structure (ROPS)/Falling Object Protective Structure (FOPS) Lock Mechanism, Loader Raising and Lowering Procedures, and Relieving Hydraulic Pressure.

Signal Words

DANGER

"DANGER" indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

WARNING

"WARNING" indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

CAUTION

"CAUTION" indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. May also alert against unsafe practices.

Additional Safety Reminders

Read and understand the Service Manual and all decals before maintaining, adjusting or servicing this equipment.

Doors, Guards and Shields - Some photographs in this manual may show doors, guards and shields open or removed for illustrative purposes only. BE SURE all doors, guards and shields are in their proper operating positions before starting engine to operate unit.

Damaged or Worn-out Parts - For safe operation, replace damaged or worn-out parts with genuine Gehl/ Mustang service parts, before operating this equipment.

Attachments - Gehl and Mustang loaders are designed and intended to be used only with Gehl/Mustang Company attachments or approved referral attachments. The Company cannot be responsible for operator safety if the loader is used with a non-approved attachment.

Battery Safety - To avoid injury from a spark or short circuit, disconnect the negative battery cable before servicing any part of the electrical system. Do not tip the battery more than 45º.

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2. With the lift and tilt spools in NEUTRAL position, adjust the lift and tilt control cables at the control valve so that both cables at the foot pedals are even and parallel to the kickplate. Tighten the hardware.
3. Reinstall the kickplate.
4. Check for full range of spool travel for both the lift and tilt cables.
5. Move the lift spool into detent (FLOAT) position.
6. **On the lift pedal**: Adjust the length of the lift control cable. Loosen the jam nut on the cable until the pedal is level and parallel to the floor plate.
7. Retighten the jam nut.
8. **On the tilt pedal**: Adjust the length of the tilt control cable. Loosen the jam nut on the cable until the tilt pedal matches the position of the lift pedal.
9. Retighten the jam nut.

Auxiliary Hydraulics Cable Removal and Installation

T-Bar models use a control cable between the auxiliary pedal and the control valve to actuate the auxiliary hydraulics. In Hand/Foot models, the actuation of the auxiliary hydraulics is in the right control handle.

Removal Procedure

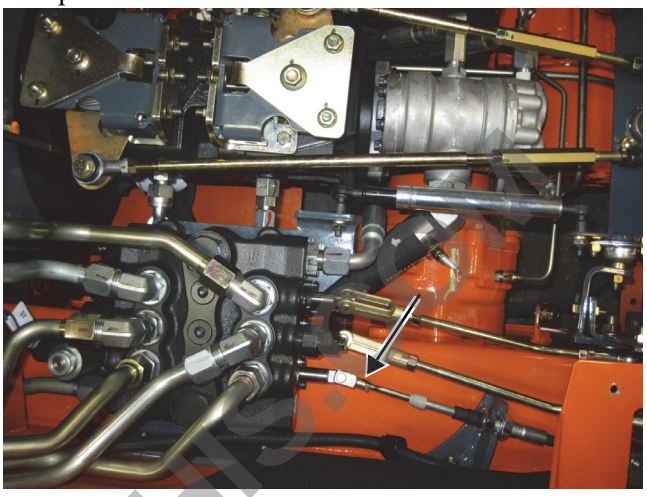
WARNING

BEFORE beginning this service procedure, perform the following SAFETY procedures:

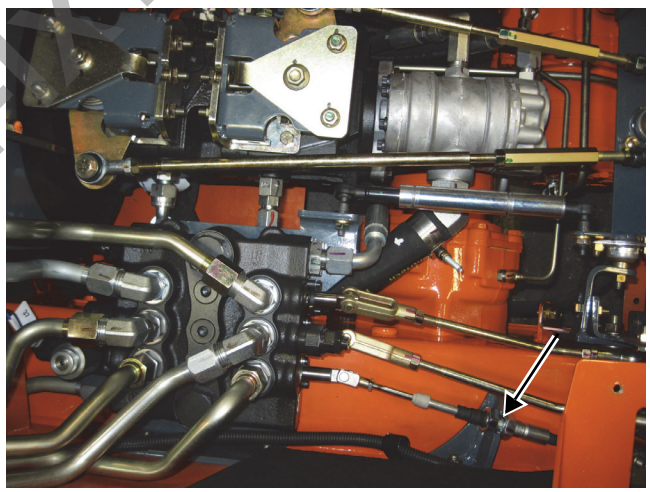
- **Remove attachment from lift arm.**
- **Raise lift arm; engage lift arm support device.**
- **Shut off the engine.**
- **Tilt back ROPS/FOPS until lock engages.**

(For detailed instructions, refer to the *Safety* chapter of this manual.)

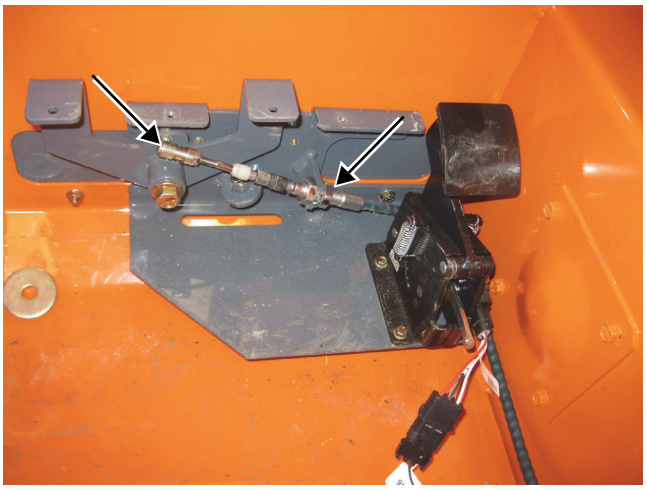
1. Remove the floor cover and kickplate per the procedure in the *Mainframe* chapter.
2. Remove the clevis and clip pin securing the auxiliary hydraulics cable to the main control valve spool.



3. Loosen the jam nut on the auxiliary cable at the welded bracket in front of the control valve. Pull the cable out of the welded bracket.



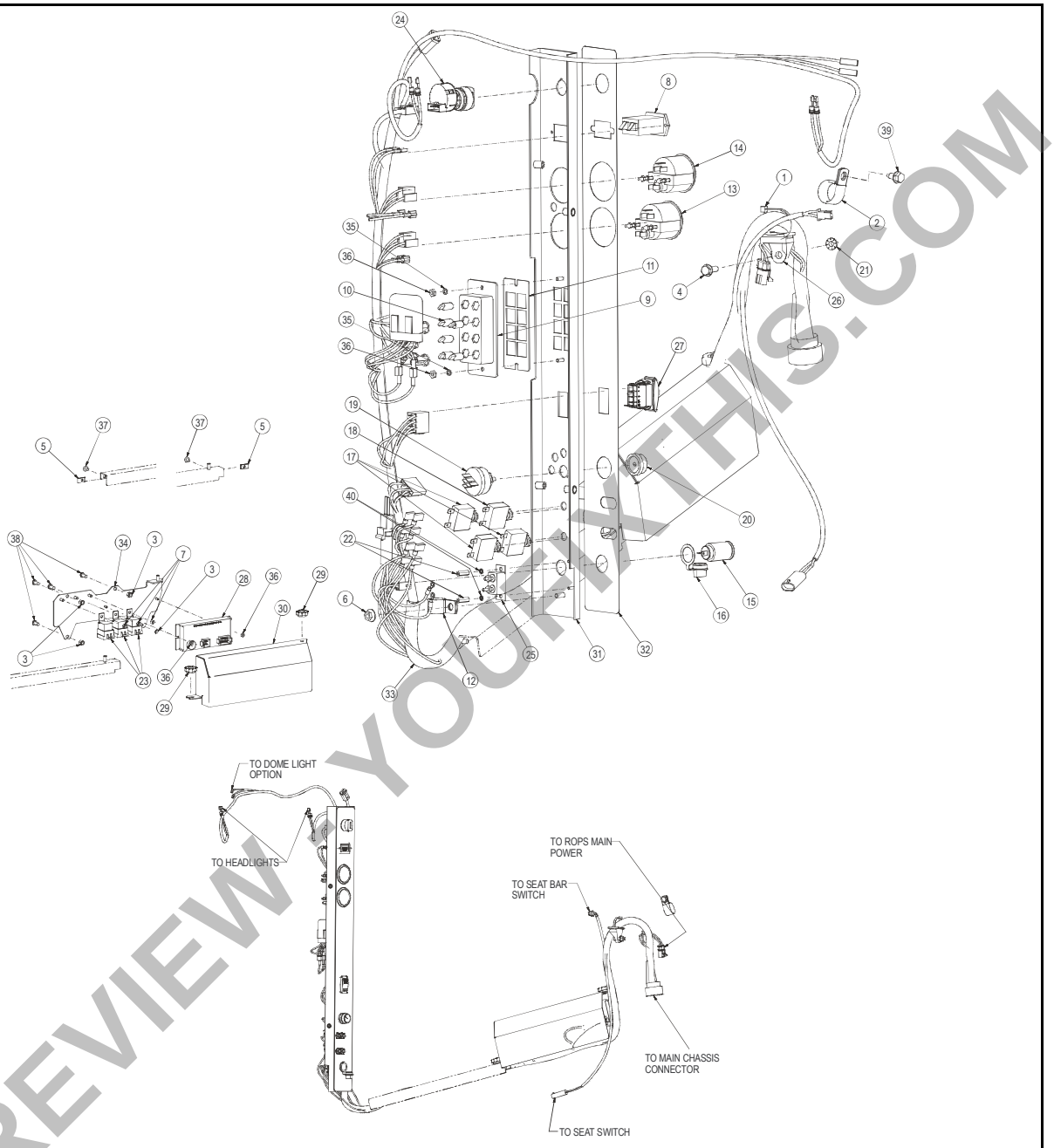
4. At the other end of the cable, remove the ball joint off the ball stud on the auxiliary cable rod end at the auxiliary bellcrank. Loosen the jam nut on the cable at the welded tab.



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Electrical ROPS/FOPS Components - Non-DPF Models



1	TIE/CABLE	15	CONNECTOR	29	KNOB/CLAMPING
2	CLAMP/HOSE	16	COVER,12V POWER PORT	30	COVER/ELECTRICAL
3	HLN INST	17	BREAKER/CIRCUIT 15 AMP	31	PANEL/INSTRUMENT/ASSEMBLY
4	CS FL LOCK	18	BREAKER/CIRCUIT 25 AMP	32	DECAL/INSTRUMENT PANEL
5	NUT/SPEED	19	LIGHT SWITCH	33	WIRE HARNESS/ROPS
6	NUT/FLLSUF	20	KNOB/CONTROL SKIRTED	34	MOUNT/COVER ASSY
7	HLN INST	21	NUT/FLRSUF	35	LW
8	GAUGE/HOURMETER	22	STANDOFF	36	HN
9	HOUSING/DISPLAY	23	RELAY/40 AMP/SEALED	37	THMS
10	BULB/LAMP	24	SWITCH/IGNITION	38	BHSCS
11	GASKET. DISPLAY HOUSING	25	CIRCUIT BREAKER 8 AMPS	39	HWHTRS
12	CLAMP/HOSE	26	MOUNT/WIRE	40	HSP LW
13	GAUGE-TEMP (WATER)	27	SWITCH/BRAKE MOMENTARY		
14	GAUGE-FUEL LEVEL	28	MODULE/CONTROL INTERLOCK		

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