Genie®
A TEREX COMPANY

# Service Manual

Serial Number Range

## GS-2668 RT
from GS6805-44771

## GS-3268 RT
from GS6805-44771

Part No. 112657
Rev C4
June 2016

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REV D SPECIFICATIONS

## Kubota DF752 Engine

| | |
|---|---|
| **Displacement** | 45.21 cu in<br>0.74 liters |
| **Number of cylinders** | 3 |
| **Bore & stroke** | 2.68 x 2.68 inches<br>68 x 68 mm |
| **Horsepower,** Gross intermittent | 24.8 @ 3600 rpm<br>18.5 kW @ 3600 rpm |
| **Firing order** | 1 - 2 - 3 |
| **Compression ratio** | 9.2:1 |
| **Compression pressure** | 128 to 185 psi<br>8.8 to 12.7 bar |
| **Low idle**<br>Frequency | 1500 rpm<br>300 hz |
| **High idle**<br>Frequency | 3200 rpm<br>640 hz |
| **Governor** | centrifugal ball mechanical |
| **Valve clearances, cold** | 0.0057 to 0.0072 inches<br>0.145 to 0.185 mm |
| **Engine coolant capacity** | 3.1 quarts<br>2.9 liters |

**Lubrication system**

| | |
|---|---|
| Oil pressure<br>(operating temperature @ 3850 rpm) | 28 to 64 psi<br>1.9 to 4.4 bar |
| Oil capacity (including filter) | 3.4 quarts<br>3.25 liters |

**Oil viscosity requirements**

Units ship with 15W-40.
Extreme operating temperatures may require the use of alternative engine oils. For oil requirements, refer to the Engine Operator Handbook on your machine.

**Fuel pump**

| | |
|---|---|
| Fuel pressure, static | 2.84 psi<br>0.19 bar |
| Fuel flow rate | 0.125 gpm<br>0.47 L/min |

**Starter motor**

| | |
|---|---|
| Brush length, new | 0.669 in<br>17 mm |
| Brush length wear limit | 0.453 in<br>11.5 mm |
| Brush spring tension | 50 to 91 ounces<br>13.7 to 25.5 N |

**Battery**

| | |
|---|---|
| Type | 12V DC |
| Group | 34/78 |
| Quantity | 1 |
| Ampere hour | 75AH |
| Cold cranking ampere | 900A |
| Reserve capacity at 25A rate | 125 minutes |

**Ignition System**

| | |
|---|---|
| Ignition spark advance | 18° BTDC |
| Ignition coil primary resistance | 1.3 to 1.6Ω<br>@ 75°F / 24°C |
| Ignition coil secondary resistance | 10.7 to 14.5 kΩ<br>@ 75°F / 24°C |
| #1 Spark plug wire resistance | 2.81 to 4.79kΩ |
| #2 Spark plug wire resistance | 3.4 to 5.8kΩ |
| #3 Spark plug wire resistance | 3.57 to 6.09kΩ |
| Spark plug type | NGK BKR4E-11 |
| Spark plug gap | 0.039 to 0.043 inches<br>1 to 1.1 mm |

**Alternator**

| | |
|---|---|
| Output | 30A, 14V DC |
| Fan belt deflection | 1/4 to 3/8 inch<br>7 to 9 mm |

**Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice.**

# Maintenance Inspection Report

**Model**

**Serial number**

**Date**

**Hour meter**

**Machine owner**

**Inspected by (print)**

**Inspector signature**

**Inspector title**

**Inspector company**

**Instructions**

- Make copies of this report to use for each inspection.
- Select the appropriate checklist(s) for the type of inspection to be performed.

| | |
|---|---|
| ☐ | **Daily or 8 hours Inspection: A** |
| ☐ | **Quarterly or 250 hours Inspection: A+B** |
| ☐ | **Semi-annually or 500 hours Inspection: A+B+C** |
| ☐ | **Annually or 1000 hours Inspection: A+B+C+D** |
| ☐ | **Two year or 2000 hours Inspection: A+B+C+D+E** |

- Place a check in the appropriate box after each inspection procedure is completed.
- Use the step-by-step procedures in this section to learn how to perform these inspections.
- If any inspection receives an “N”, tag and remove the machine from service, repair and re-inspect it. After repair, place a check in the “R” box.

**Legend**

Y = yes, acceptable

N = no, remove from service

R = repaired

| **Checklist A** - Rev B | | **Y** | **N** | **R** |
|---|---|---|---|---|
| A-1 | Manuals and decals | | | |
| A-2 | Pre-operation inspect | | | |
| A-3 | Function tests | | | |
| A-4 | Engine maintenance | | | |
| **Perform every 40 hours:** | | | | |
| A-5 | Engine air filter | | | |
| **Perform after 40 hours:** | | | | |
| A-6 | Perform 30 day service | | | |
| **Perform after 50 hours:** | | | | |
| A-7 | Engine maintenance - Kubota models | | | |
| **Perform every 50 hours:** | | | | |
| A-8 | Engine maintenance - Kubota models | | | |
| **Perform every 100 hours:** | | | | |
| A-9 | Engine maintenance - Kubota models | | | |
| **Perform every 200 hours:** | | | | |
| A-10 | Engine maintenance - Kubota models | | | |
| A-11 | Drain filter/separator - Diesel models | | | |
| **Perform every 1-2 months:** | | | | |
| A-12 | Engine maintenance - Kubota models | | | |

| **Checklist B** - Rev B | | **Y** | **N** | **R** |
|---|---|---|---|---|
| B-1 | Battery | | | |
| B-2 | Electrical wiring | | | |
| B-3 | Tires and wheels | | | |
| B-4 | Engine maintenance - Perkins models | | | |
| B-5 | Key switch | | | |
| B-6 | Emergency Stop | | | |
| B-7 | Horn | | | |
| B-8 | Fuel select - Gasoline/LPG models | | | |
| B-9 | Drive brakes | | | |
| B-10 | Drive speed - stowed | | | |
| B-11 | Drive speed - raised | | | |
| B-12 | Tank venting systems | | | |
| B-13 | Hydraulic oil analysis | | | |
| B-14 | Flashing beacons (if equipped) | | | |
| **Perform every 400 hours:** | | | | |
| B-15 | Engine maintenance - Kubota models | | | |

**Comments**

# Checklist B Procedures

REV B

## B-1
## Inspect the Battery

Genie requires that this procedure be performed every 250 hours or quarterly, whichever comes first.

Proper battery condition is essential to good machine performance and operational safety. Improper fluid levels or damaged cables and connections can result in component damage and hazardous conditions.

**⚠WARNING** Electrocution/burn hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

**⚠WARNING** Bodily injury hazard. Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.

1 Put on protective clothing and eye wear.

2 Be sure that the battery cable connections are free of corrosion.

Note: Adding terminal protectors and a corrosion preventative sealant will help eliminate corrosion on the battery terminals and cables.

3 Be sure that the battery retainers and cable connections are tight.

4 Fully charge the battery. Allow the battery to rest 24 hours before performing this procedure to allow the battery cells to equalize.

5 Remove the battery vent caps and check the specific gravity of each battery cell with a hydrometer. Note the results.

6 Check the ambient air temperature and adjust the specific gravity reading for each cell as follows:

- Add 0.004 to the reading of each cell for every 10° / 5.5° C above 80° F / 26.7° C.
- Subtract 0.004 from the reading of each cell for every 10° / 5.5° C below 80° F / 26.7° C.

⊙ Result: All battery cells display an adjusted specific gravity of 1.277 or higher. The battery is fully charged. Proceed to step 10.

⊠ Result: One or more battery cells display a specific gravity of 1.217 or below. Proceed to step 7.

7 Perform an equalizing charge OR fully charge the batteries and allow the battery to rest at least 6 hours.

8 Remove the battery vent caps and check the specific gravity of each battery cell with a hydrometer. Note the results.

9 Check the ambient air temperature and adjust the specific gravity reading for each cell as follows:

- Add 0.004 to the reading of each cell for every 10° / 5.5° C above 80° F / 26.7° C.
- Subtract 0.004 from the reading of each cell for every 10° / 5.5° C below 80° F / 26.7° C.

⊙ Result: All battery cells display a specific gravity of 1.277 or greater. The battery is fully charged. Proceed to step 10.

⊠ Result: The difference in specific gravity readings between cells is greater than 0.1 OR the specific gravity of one or more cells is less than 1.217. Replace the battery.

10 Check the battery acid level. If needed, replenish with distilled water to 1/8 inch / 3 mm below the bottom of the battery fill tube. Do not overfill.

11 Install the vent caps and neutralize any electrolyte that may have spilled.

# Checklist C Procedures

REV B

## C-1
## Test the Platform Overload System (if equipped)

Genie specifications require that this procedure be performed every 500 hours or six months, whichever comes first OR when the machine fails to lift the maximum rated load.

Testing the platform overload system regularly is essential to safe machine operation. Continued use of an improperly operating platform overload system could result in the system not sensing an overloaded platform condition. Machine stability could be compromised resulting in the machine tipping over.

1 Disconnect the platform controls from the machine at the platform.

2 Open the ground control panel and locate the Electronic Control Module (ECM).

3 Tag and disconnect the platform controls wire harness from the ECM wire harness.

4 Securely connect the platform controls to the ECM wire harness.

5 Locate the terminal strip behind the ground control panel.

6 Tag and disconnect the black wire of the maximum height limit switch wire harness from the A10 terminal of the terminal strip.

7 Tag and disconnect the white wire of the maximum height limit switch wire harness from the B9 terminal of the terminal strip.

8 Securely connect a jumper wire from terminal A10 of the terminal strip to terminal B9 of the terminal strip.

9 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

10 Fully raise the platform. Release the joystick.

⊙ Result: The engine should stop and an alarm should sound and fault code 99 PLATFORM OVERLOAD should be present in the ECM diagnostic display window at the ground controls.

⊠ Result: The engine does not stop OR an alarm doesn't sound OR fault code 99 is not present in the ECM diagnostic display window at the ground controls. Refer to Repair Procedure 15-1, *Calibrate the Platform Overload System (if equipped).*

11 Activate the auxiliary lowering function and lower the platform approximately 4.5 m.

12 Turn the key switch to the off position.

13 Disconnect the jumper wire from terminal A10 of the terminal strip to terminal B9 of the terminal strip.

14 Securely connect the black wire of the maximum height limit switch wire harness to terminal A10 of the terminal strip.

15 Securely connect the white wire of the maximum height limit switch wire harness to terminal B9 of the terminal strip.

16 Turn the key switch to platform control.

17 Fully raise the platform. Release the joystick.

⊙ Result: The platform should stop raising at maximum height. The engine should continue to run and an alarm should not sound.

⊠ Result: The engine stops OR an alarm sounds. Refer to Repair Procedure 15-1, *Calibrate the Platform Overload System (if equipped).*

18 Lower the platform to the stowed position.

19 Disconnect the platform controls from the ECM wire harness.

20 Securely connect the platform controls wire harness to the ECM wire harness.

21 Securely connect the platform controls to the platform controls wire harness at the platform.

REV B CHECKLIST E PROCEDURES

## E-3
## Perform Engine Maintenance - Gasoline/LPG Models

Engine specifications require that this procedure be performed every two years.

Required maintenance procedures and additional engine information is available in the *Kubota DF750 Operator's Manual* (Kubota part number EG261-8916-1) OR the *Kubota DF752 Operator's Manual* (Kubota part number EG601-8916-1).

| | |
|---|---|
| **Kubota DF750 Operator's Manual** | |
| Genie part number | 97359 |
| **Kubota DF752 Operator's Manual** | |
| Genie part number | 84250 |

## E-4
## Perform Engine Maintenance - Kubota D1105 Models

Engine specifications require that this procedure be performed every two years.

Required maintenance procedures and additional engine information is available in the *Kubota D1105 Operator's Manual* (Kubota part number 16622-89166).

| | |
|---|---|
| **Kubota D1105 Operator's Manual** | |
| Genie part number | 131379 |

34 Remove the cables from the lower cable tray. Lay the cables off to the side of the machine.

35 Remove the mounting fasteners from the lower cable tray mounting bracket on the number 2 center pivot pin (index #7) at the engine side of the machine.

36 Remove the mounting fasteners from the lower cable tray supports at both ends of the lower cable tray.

37 Remove the lower cable tray from the machine.

**NOTICE** Component damage hazard. Cables can be damaged if they are kinked or pinched.

38 Attach a lifting strap from an overhead crane to the lug on the rod end of the lift cylinder.

39 Remove the pin retaining fasteners from the cylinder rod-end pivot pin (index #5). Use a soft metal drift to remove the pin.

**⚠WARNING** Crushing hazard. The cylinder could fall if not properly supported when the pin is removed.

40 Lower the cylinder onto the number 1 center pivot pin (index #9).

41 Remove the external snap rings from the number 3 pivot pin (index #6) at the steer end.

42 Use a soft metal drift to remove the number 3 pivot pin (index #6) at the steer end. Remove the number 3 inner arm (index #16) from the machine.

**⚠WARNING** Crushing hazard. The number 3 inner arm (index #16) could become unbalanced and fall if not properly supported when removed from the machine.

43 Attach a lifting strap from an overhead crane to the number 2 outer arm (index #20) at the ground controls side.

44 Support the number 2 inner arm (index #19) with a second overhead crane at the non-steer end.

45 Remove the external snap rings from the number 2 center pivot pin (index #7) at the ground controls side.

46 Use a soft metal drift to remove the number 2 center pivot pin (index #7) at the ground controls side.

47 Remove the external snap rings from the number 2 pivot pin (index #21) at the non steer end.

48 Use a soft metal drift to tap the number 2 pivot pin (index #21) halfway out at the non-steer end of the machine. Remove the number 2 outer arm (index #20) at the ground controls side from the machine.

**⚠WARNING** Crushing hazard. The number 2 outer arm (index #20) at the ground controls side could become unbalanced and fall if not properly supported when removed from the machine.

49 Attach a lifting strap from an overhead crane to the number 2 outer arm (index #20) at the engine side.

50 Remove the external snap rings from the number 2 center pivot pin (index #7) at the engine side.

51 Use a soft metal drift to remove the number 2 center pivot pin (index #7) at the engine side.

# 3-3
# Wear Pads

## How to Replace the Scissor Arm Wear Pads

**Platform Scissor Arm Wear Pads:**

1 Remove the platform. See 2-1, How to Remove the Platform.

2 Remove the wear pads from the slide blocks. Discard the wear pads.

3 Using a mild solvent, clean the wear pad mounting surfaces of both slide blocks.

4 Use a knife or scissors to cut the provided double-sided adhesive tape to the correct length.

**NOTICE** Component damage hazard. Use a knife or scissors to cut the tape to length. Tearing the tape will at the same time stretch the tape, reducing the adhesive quality of the tape. Do not tear the tape.

5 Remove the protective cover from the adhesive tape and install the tape, equally spaced, onto the slide block. Do not stretch the tape during installation.

**NOTICE** Component damage hazard. Stretching the tape will reduce the adhesive quality of the tape. Do not stretch the tape.

6 Install the wear pads onto the slide blocks. Securely fix the adhesive tape of the slide blocks to the wear pads using firm, even hand pressure.

7 Install the platform.

**Chassis Scissor Arm Wear Pads:**

1 Attach a lifting strap from an overhead crane to the ladder at the non-steer end of the machine. Support the ladder. Do not apply any lifting pressure.

2 Remove the fasteners securing the ladder to the chassis. Remove the ladder from the machine.

**⚠WARNING** Crushing hazard. The ladder could fall if not properly supported when the fasteners are removed from the machine.

3 Secure both ends of the scissor arms together with a strap or other suitable device.

4 Attach a strap from an overhead crane to the non-steer end of the scissor arms.

5 Raise the scissor arms slightly at the non-steer end with the overhead crane just enough to take the pressure off of the non-steer end slide blocks.

6 Remove the pin retaining fasteners from the slide block pivot pin.

7 Place a rod through the pin and twist to remove the pin.

8 Remove the slide block and remove the wear pad mounting fasteners.

9 Install the new wear pad. Install and securely tighten the fasteners. Do not over tighten.

10 Repeat steps 6 through 9 for the other wear pad slide block.

11 Install the wear pad slide blocks into the drive chassis and install the slide block pivot pins and pin retaining fasteners. Securely tighten the fasteners. Do not over tighten.

12 Securely install the ladder onto the machine. Do not over tighten the fasteners.

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# REV B Perkins 403D-11 and 403C-11 Engines

## 6-1 Engine RPM

### How to Adjust the RPM

1 Start the engine from the ground controls.

2 Hold the start toggle switch to the start position and check the engine RPM on the diagnostic display. Refer to Section 2, *Specifications*. Proceed to step 4 if the low idle is correct.

3 To correct the low idle speed, loosen the locknut on the low idle adjustment screw. Turn the low idle adjustment screw on the linkage clockwise to increase rpm or counterclockwise to decrease rpm. Tighten the lock nut and recheck the rpm. See the illustration.

4 Move the engine idle control switch to high idle (rabbit symbol) from the ground controls.

5 Hold the start toggle switch to the start position and check the engine RPM on the diagnostic display. Refer to Section 2, *Specifications*.

6 To correct the high idle speed, loosen the yoke lock nut on the high idle solenoid, then turn the high idle adjustment nut and solenoid boot counterclockwise to increase the rpm or clockwise to decrease the rpm. Tighten the yoke lock nut and recheck the rpm. See the illustration.

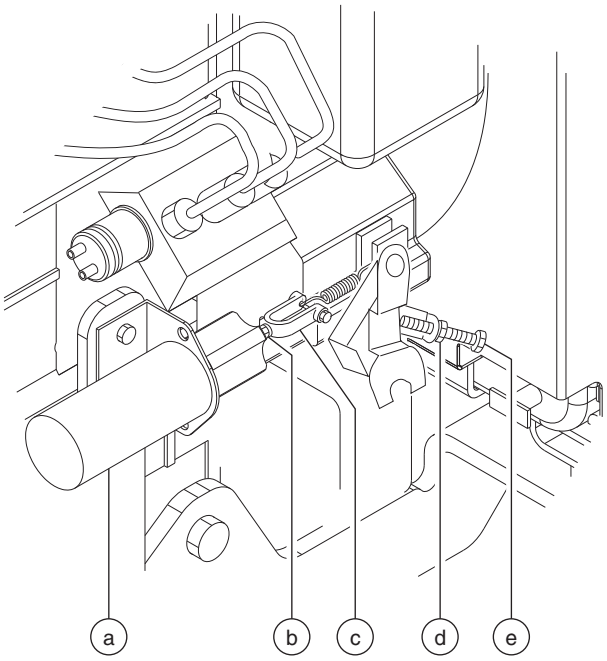
Note: Be sure the solenoid fully retracts when activating high idle.

## 6-2 Timing Adjustment

Complete information to perform this procedure is available in the *Perkins 403D-11 Workshop Manual* (Perkins part number KENR6942) OR the *Perkins 403C-11 Workshop Manual* (Perkins part number TPD1458).

| **Perkins 403D-11 Workshop Manual** | |
|---|---|
| Genie part number | 131662 |

| **Perkins 403C-11 Workshop Manual** | |
|---|---|
| Genie part number | 84817 |




a solenoid
b yoke locknut
c yoke
d low idle lock nut
e low idle adjustment screw

13 Use the yellow platform down arrow to scroll to generator option.

- Result: GENERATOR AUTO is showing in the diagnostic display window. Press the lift function enable button to activate or deactivate the generator option.

Note: For this option to function correctly, the machine must be equipped with the required generator components and the software set to GENERATOR AUTO or GENERATOR ON.

14 Use the yellow platform down arrow to scroll to outriggers option.

- Result: OUTRIGGERS AUTO is showing in the diagnostic display window. Press the lift function enable button to activate or deactivate the outrigger option. Proceed to step 18.

Note: For this option to function correctly, the machine must be equipped with the required outrigger components and the software set to OUTRIGGERS AUTO or OUTRIGGERS ON.

15 Use the yellow platform down arrow to scroll to beacons option.

- Result: BEACONS OFF is showing in the diagnostic display window. Press the lift function enable button to activate or deactivate the beacons option.

Note: For this option to function, the machine must be equipped with flashing beacons.

16 Use the yellow platform down arrow to scroll to generator option.

- Result: GENERATOR OFF is showing in the diagnostic display window. Press the lift function enable button to activate or deactivate the generator option.

Note: For this option to function correctly, the machine must be equipped with the required generator components.

17 Use the yellow platform down arrow to scroll to outriggers option.

- Result: OUTRIGGERS OFF is showing in the diagnostic display window. Press the lift function enable button to activate or deactivate the outrigger option.

Note: For this option to function correctly, the machine must be equipped with the required outrigger components.

**ANSI and CSA models with all software revisions:**

18 Use the yellow platform down arrow to scroll to return to the main menu.

- Result: RETURN TO MAIN MENU is showing in the diagnostic display window.

19 Press the lift function enable button.

- Result: SELECT OPTIONS is showing in the diagnostic display window.

20 Push in the red Emergency Stop button to the off position at the ground controls.

36 Raise the platform at least 12 feet / 3.6 m.

⊙ Result: The platform stops raising and the tilt alarm will sound at 180 beeps per minute.

⊠ Result: The platform does not stop raising and the tilt alarm does not sound. The level sensor must be replaced. Repeat this procedure beginning with step 2.

Note: For reference only, the output of the level sensor should be approximately 3.3V DC. To confirm, connect the positive lead of a multimeter to the yellow wire at the level sensor, and the negative lead to the black wire.

37 Lower the platform to the stowed position.

38 Raise the machine slightly.

39 Remove the blocks from under both wheels.

40 Lower the machine and remove the jack.

**Confirm the front-to-back level sensor setting:**

41 Center a lifting jack under the drive chassis at the steer end of the machine.

42 Raise the machine approximately 6 inches / 15 cm.

43 Place a 4.08 x 10 x 10 inch / 10.36 x 25 x 25 cm thick steel block under both wheels at the steer end of the machine.

44 Lower the machine onto the blocks.

45 Raise the platform at least 12 feet / 3.6 m.

⊙ Result: The platform stops raising and the tilt alarm will sound at 180 beeps per minute.

⊠ Result: The platform does not stop raising and the tilt alarm does not sound. The level sensor must be replaced. Repeat this procedure beginning with step 2.

Note: For reference only, the output of the level sensor should be approximately 1.5V DC. To confirm, connect the positive lead of a multimeter to the blue wire at the level sensor, and the negative lead to the black wire.

46 Lower the platform to the stowed position.

47 Raise the machine slightly.

48 Remove the blocks from under both wheels.

49 Lower the machine and remove the jack.

50 Center a lifting jack under the drive chassis at the non-steer end of the machine.

51 Raise the machine approximately 6 inches / 15 cm.

52 Place a 4.08 x 10 x 10 inch / 10.36 x 25 x 25 cm thick steel block under both wheels at the non-steer end of the machine.

53 Lower the machine onto the blocks.

54 Raise the platform at least 12 feet / 3.6 m.

⊙ Result: The platform stops raising and the tilt alarm will sound at 180 beeps per minute.

⊠ Result: The platform does not stop raising and the tilt alarm does not sound. The level sensor must be replaced. Repeat this procedure beginning with step 2.

Note: For reference only, the output of the level sensor should be approximately 3.4V DC. To confirm, connect the positive lead of a multimeter to the blue wire at the level sensor, and the negative lead to the black wire.

55 Lower the platform to the stowed position.

56 Raise the machine slightly.

57 Remove the blocks from under both wheels.

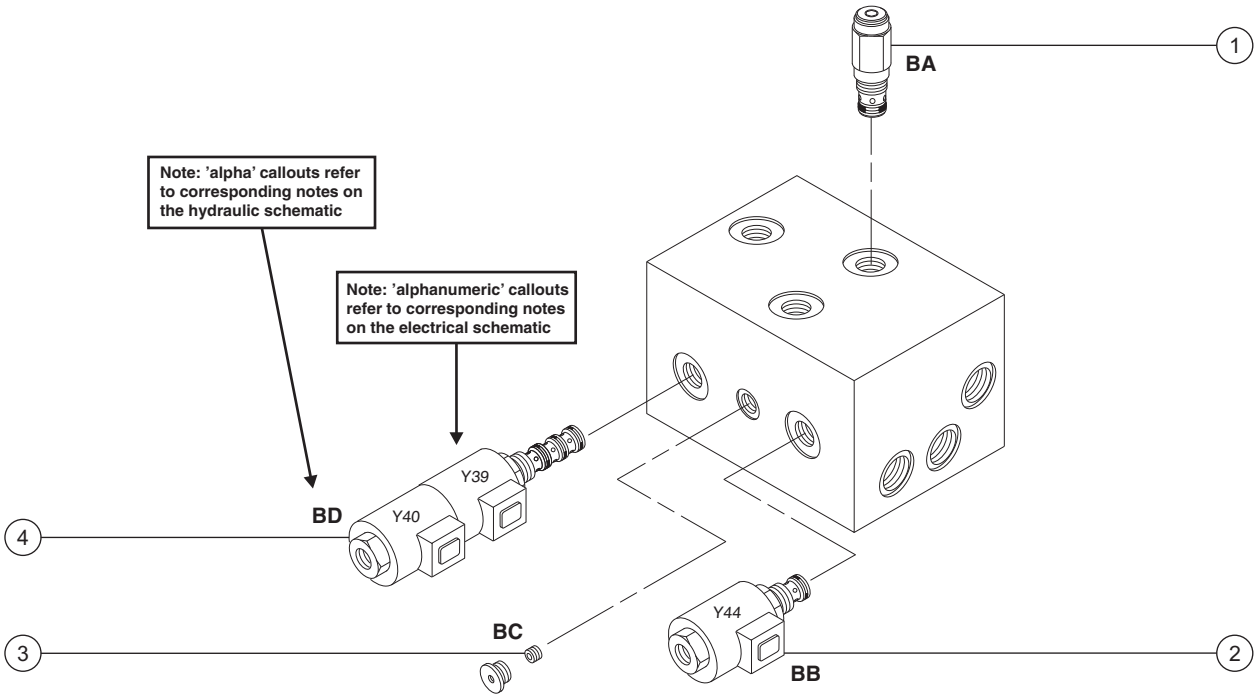
58 Lower the machine and remove the jack.

59 Turn the key switch to the off position.

# 9-3
# Outrigger Manifold Components

The outrigger manifold is located beneath the hose cover panel on top of the drive chassis

| Index No. | Description | Schematic Item | Function | Torque |
|---|---|---|---|---|
| 1 | Relief valve, 2000 psi / 137.8 bar | BA | Outrigger circuit | 20 ft-lbs / 27.1 Nm |
| 2 | Solenoid valve, 2 position 2 way | BB | Outrigger slow extend | 25 ft-lbs / 34 Nm |
| 3 | Orifice - plug, 0.063 inch / 1.6 mm | BC | Outrigger retract | |
| 4 | Solenoid valve, 3 position 4 way | BD | Outrigger extend/retract | 25 ft-lbs / 34 Nm |



## How to Remove a Drive Motor

**NOTICE** Component damage hazard. Repairs to the motor should only be performed by an authorized dealer.

**NOTICE** Component damage hazard. The work area and surfaces where this procedure will be performed must be clean and free of debris that could get into the hydraulic system and cause severe component damage. Dealer service is recommended.

Note: When removing a hose assembly or fitting, the O-ring on the fitting and/or hose must be replaced and then torqued to specification during installation. Refer to Section Two, *Hydraulic Hose and Fitting Torque Specifications*.

1 Loosen the wheel lug bolts. Do not remove them.

2 Block the non-steer end wheels and center a lifting jack under the steer end of the machine.

3 Raise the machine approximately 2 inches / 5 cm. Place blocks under the chassis for support.

**⚠WARNING** Crushing hazard. The chassis will fall if not properly supported.

4 Remove the wheel lug bolts. Remove the tire and wheel assembly.

5 Tag, disconnect and plug the hoses from the drive motor. Cap the fittings on the drive motor.

**⚠WARNING** Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

6 Remove the drive motor mounting fasteners. Remove the drive motor from the machine.

**Enable the descent delay function:**

49 Push in the red Emergency Stop button to the off position at the ground controls.

50 Turn the key switch to ground control.

51 Press and hold both the blue platform up and yellow platform down buttons. Pull out the red Emergency Stop button to the on position at the ground controls.

⊙ Result: TUNE SPEEDS is showing in the diagnostic display window.

52 Use the yellow platform down arrow to scroll to select options.

⊙ Result: SELECT OPTIONS is showing in the diagnostic display window. The ECM is now in programming mode.

53 Press the lift function enable button.

⊙ Result: DESCENT DELAY OFF is showing in the diagnostic display window.

54 Press the lift function enable button to activate the descent delay option.

⊙ Result: DESCENT DELAY ON is showing in the diagnostic display window.

55 Push in the red Emergency Stop button to the off position at the ground controls.

56 Pull out the red Emergency Stop button to the on position at the ground controls.

**Calibrate the down limit switch:**

57 Turn the key switch to platform control. Start the engine.

58 Raise the platform approximately 1 m.

59 Lower the platform until the down limit switch activates and the platform stops lowering. Quickly release the controls and then **immediately** attempt to lower the platform to the stowed position.

⊙ Result: The platform stops for 4 to six seconds. Release the joystick and proceed to step 67.

⊠ Result: The platform stops and then will immediately begin to lower again. The down limit switch needs to be calibrated. Proceed to step 60.

60 Raise the platform to approximately 4 m.

61 Rotate the safety arm away from the machine and let it hang down.

62 Loosen the fasteners securing the down limit switch just enough to allow movement of the limit switch.

63 Move the roller head of the down limit switch 1 mm upwards. Tighten the fasteners. Do not over tighten.

64 Raise the platform approximately 1 m.

65 Return the safety arm to the stowed position.

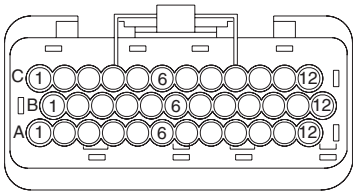
66 Repeat this procedure beginning with step 59.

# Electronic Control Module Pin-Out Legend

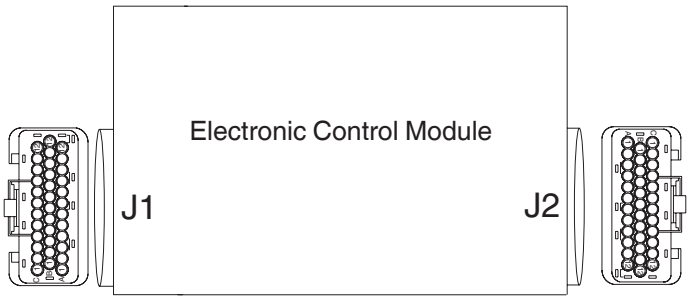
REV A (from serial number GS6805-44771)

| J1 Connector (36 pin) | |
|---|---|
| A1 | Right turn - Y3 (output) |
| A2 | Left turn - Y4 (output) |
| A3 | Platform up - Y8 (output) |
| A4 | Brake - Y2 (output) |
| A5 | Drive forward 1 - Y6 (output) (GS-68) |
| A6 | Drive reverse 1 - Y5 (output) (GS-68) |
| A7 | Drive forward 2 - Y6A (output) (GS-68) |
| A8 | Drive reverse 2 - Y5A (output) (GS-68) |
| A9 | Platform down - Y7 (output) |
| A10 | Drive coil - Y1 (output) |
| A11 | Drive coil - Y1A (output) |
| A12 | Drive coil - Y1B (output) |
| | |
| B1 | Generator - Y29 (output) |
| B2 | Drive reverse - Y51 (output) (GS-84/90) |
| B3 | Proportional flow control - Y9 (output) (GS-68) |
| B3 | Drive forward - Y51 (output) (GS-84/90) |
| B4 | Proportional flow control - Y9 (output) (GS-84/90) |
| B5 | Right front outrigger - Y36 (output) |
| B6 | Outrigger extend - Y40 (output) |
| B7 | Outrigger retract - Y39 (output) |
| B8 | Outrigger extend slow - Y44 (output) (GS-68) |
| B9 | Left front outrigger - Y35 (output) |
| B10 | Left rear outrigger - Y33 (output) |
| B11 | Right rear outrigger - Y34 (output) |
| B12 | LPG select/diesel shutoff (output) |
| | |
| C1 | Plug |
| C2 | Platform overload (input) |
| C3 | Right front outrigger limit switch LS13 (input) |
| C4 | Right rear outrigger limit switch LS12 (input) |
| C5 | Left front outrigger limit switch LS12 (input) |
| C6 | Left rear outrigger limit switch LS14 (input) |
| C7 | Alternator (input) |
| C8 | Engine oil pressure SW2 (input) |
| C9 | Engine water temp SW1 OR oil temp SW3 (input) |
| C10 | Plug |
| C11 | Fuel coil (output) |
| C12 | Plug |

| J2 Connector (36 pin) | |
|---|---|
| A1 | Up limit switch LS5 (input) |
| A2 | Down limit switchLS6 (input) |
| A3 | Aux down power (input) |
| A4 | Aux down relay CR23-86 (output) |
| A5 | Key switch KS1-3 (input) |
| A6 | Level sensor S7 (white) (input) |
| A7 | Plug |
| A8 | Plug |
| A9 | Plug |
| A10 | Platform controls (ground) (input) |
| A11 | Platform controls data high (+) (input) |
| A12 | Platform controls data low (-) (input) |
| | |
| B1 | Level sensor S8 (blue) (input) |
| B2 | Level sensor S8 (black) (input) |
| B3 | Level sensor S8 (yellow) (input) |
| B4 | Plug |
| B5 | Plug |
| B6 | Plug |
| B7 | Engine start relay CR1-86 (output) |
| B8 | Ignition relay CR8-86 (output) |
| B9 | Engine high idle (output) |
| B10 | Level sensor S8 (red) (output) |
| B11 | Horn relay CR5-86 (output) |
| B12 | Alarm (output) |
| | |
| C1 | System power (input) |
| C2 | System power (input) |
| C3 | System power (input) |
| C4 | Engine starting aid (output) |
| C5 | Oscillate stowed relay CR84-86 (output) |
| C6 | Oscillate raised relay CR85-86 (output) |
| C7 | Ground (output) |
| C8 | Plug |
| C9 | Plug |
| C10 | Aux down relay CR23-87 (output) (GS-84/90) |
| C11 | Flashing beacons FS1 (output) |
| C12 | ECM power (input) |



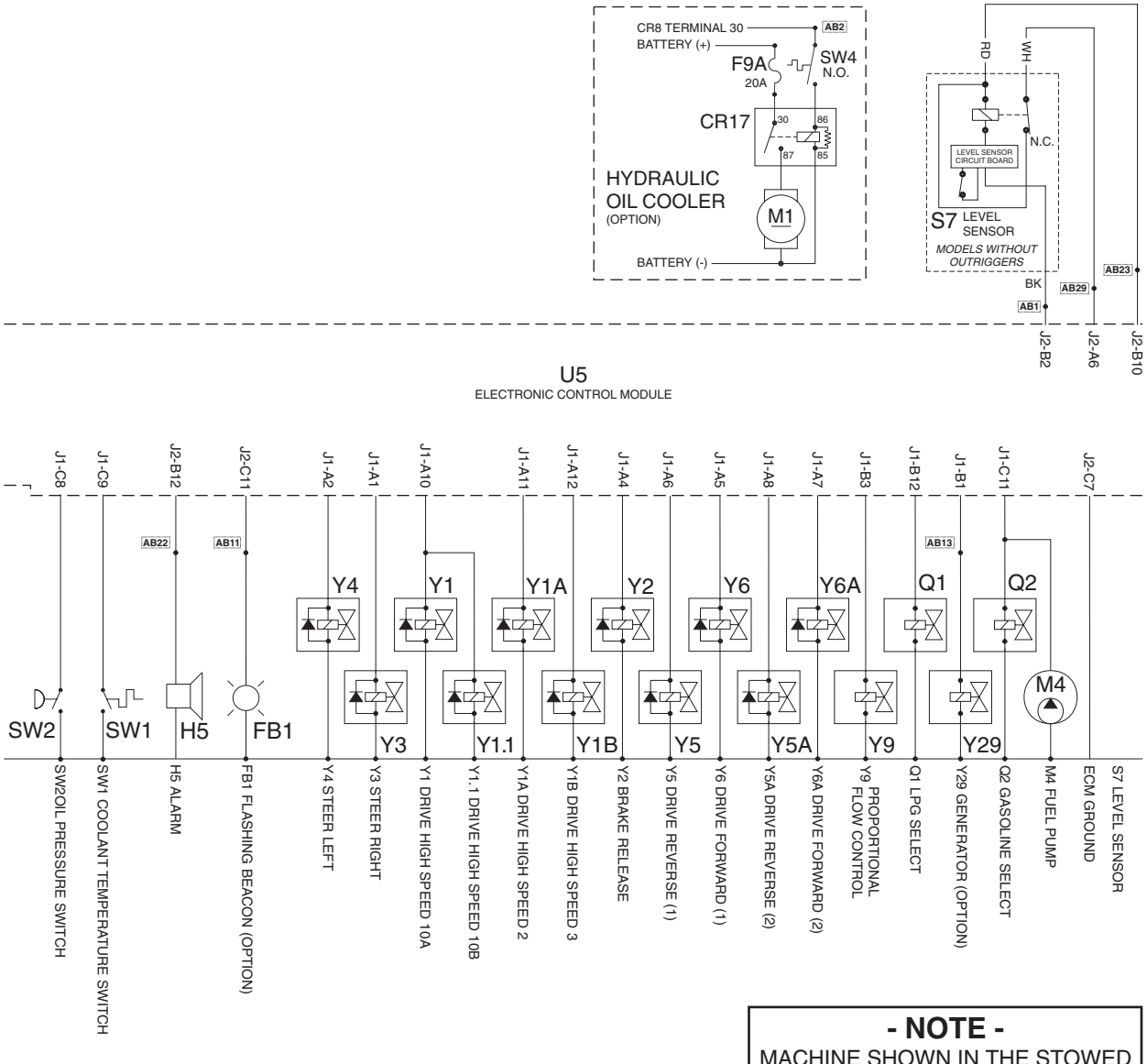

36 pin connector



# Electrical Schematic

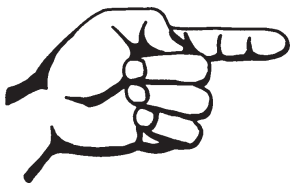
REV D

CE Models with Gasoline/LPG Power
(from serial number GS6805-44771)
Part 2 of 3




**- NOTE -**
MACHINE SHOWN IN THE STOWED POSITION WITH THE POWER OFF

ES7183G



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