SERVICE MANUAL

E26B SR / E29B SR

Mini Excavator

PREVIEW - YOUFIXTHIS.COM

Part number 84563189B
English
April 2014

NEW HOLLAND CONSTRUCTION

Copyright © 2014 CNH Industrial Italia S.p.A. All Rights Reserved.

Contents

Engine - 10

[10.001] Engine and crankcase 10.1

[10.102] Pan and covers 10.2

[10.106] Valve drive and gears 10.3

[10.101] Cylinder heads 10.4

[10.105] Connecting rods and pistons 10.5

[10.103] Crankshaft and flywheel 10.6

[10.216] Fuel tanks 10.7

[10.218] Fuel injection system 10.8

[10.202] Air cleaners and lines 10.9

[10.250] Turbocharger and lines 10.10

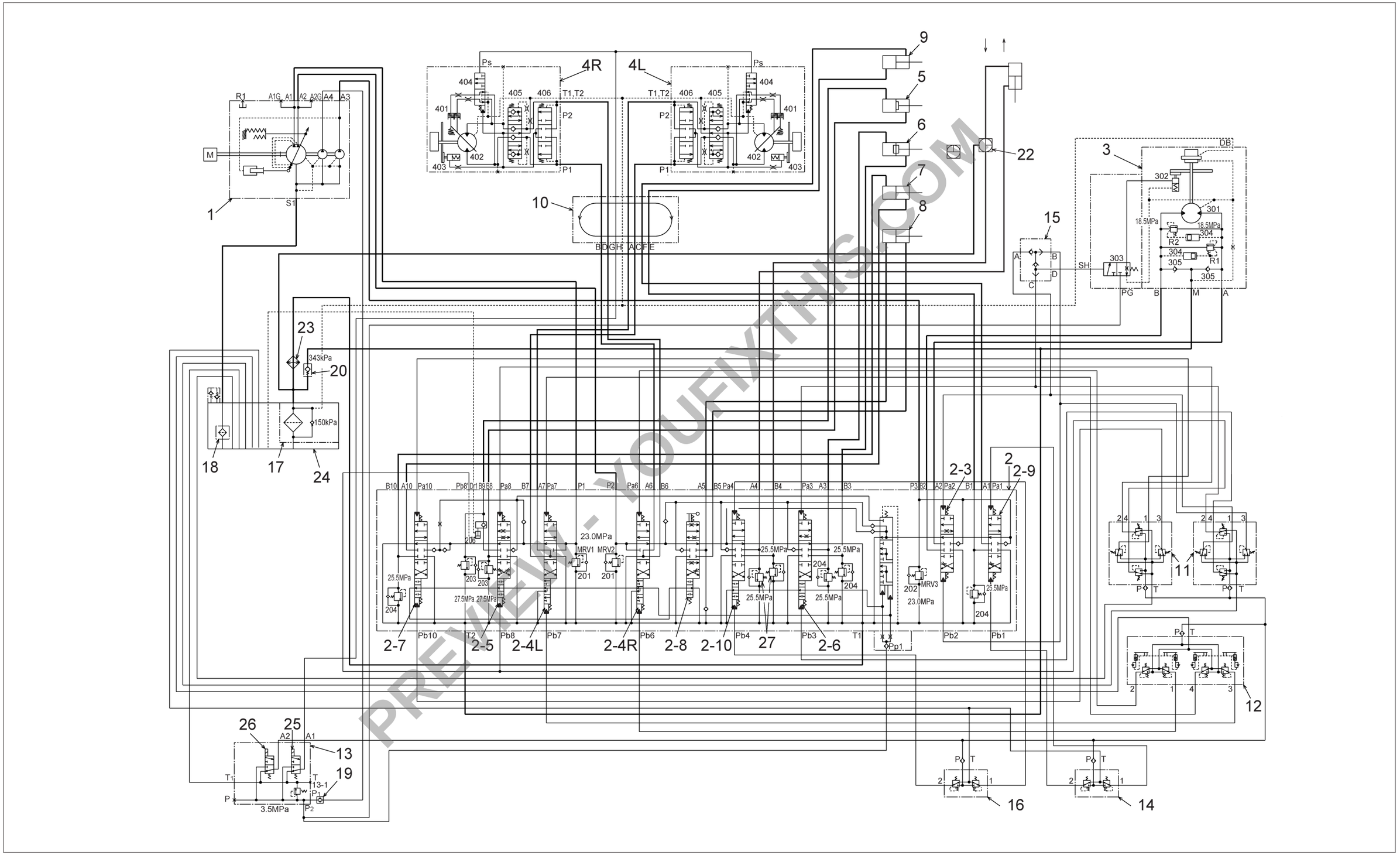
[10.254] Intake and exhaust manifolds and muffler 10.11

[10.400] Engine cooling system 10.12

[10.304] Engine lubrication system 10.13

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

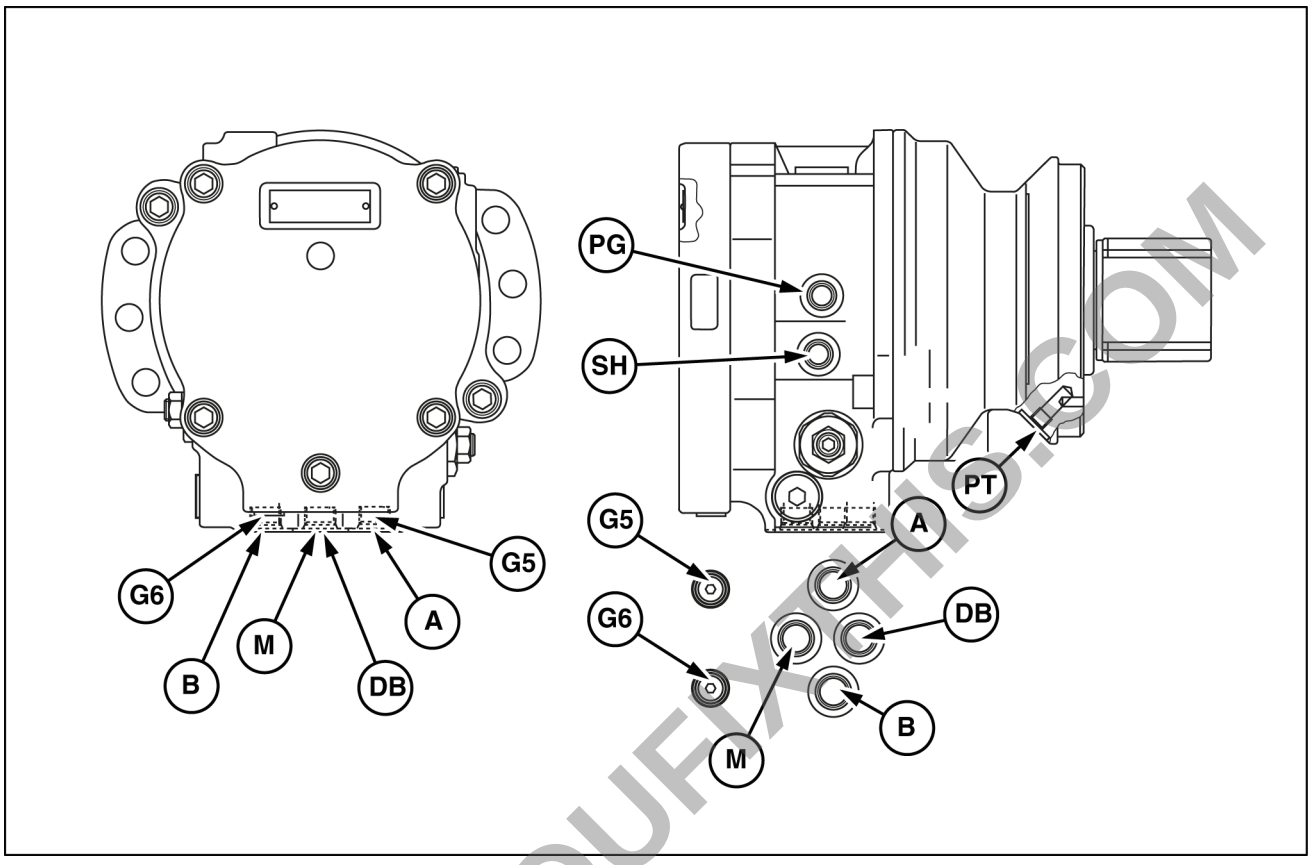


PREVIEW - YOUFIXTHIS.COM

SMIL13MEX0277JB 1

Download full manual at youfixthis.com

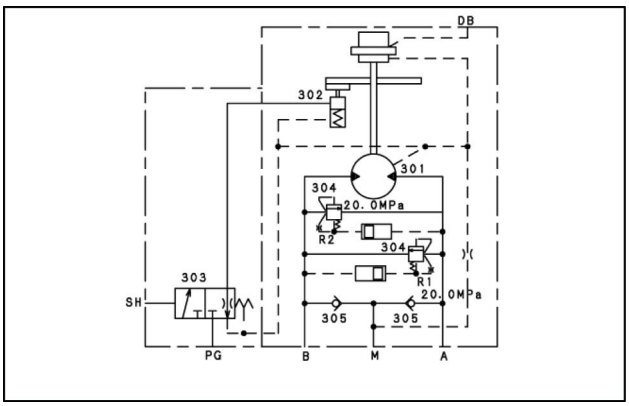
Hydraulic swing system - General specification



TULI12EXN6163FB 1

Hydraulic diagram

Port	Name	Dimensions
A	Main port	**PF 3/8**
B	Main port	
M	Make up port	
DB	Discharge port	
PG	Slewing parking brake release port	**PF 1/4**
SH	Slewing parking brake pilot port	
G5	Indicator port	**PF 1/8**
G6		
PT	Port for grease piping	**PT 1/8**



TULI12EXN6164AA 2

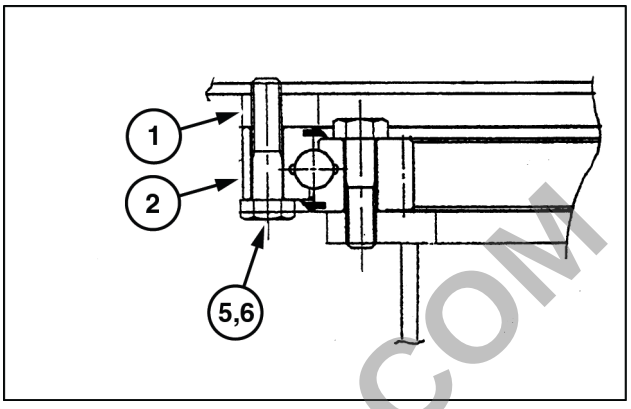
Rotational direction: Inlet **A** port: **CW**
Inlet **B** port: **CCW**
(View from shaft end)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Upper frame - Remove

1. Provide match-marks on the slewing bearing. Provide match marks between the upper frame **(1)** and the outer race of slewing bearing **(2)**.
2. Lifting upper frame temporarily.
   Temporarily lift the upper frame at three points applying wire ropes **(1)** on a position of the swing-bracket mounting hole for the front side and on two places of the rear end of the upper frame **(1)**.

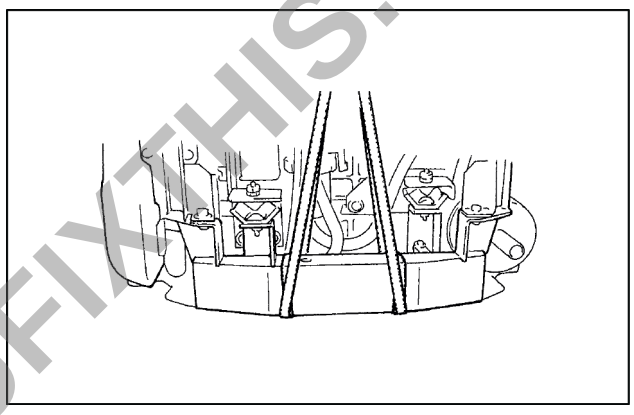


TULI12EXN4981AB 1

3. Removing bolt for mounting upper frame **(1)**. Loosen the screw **(6)** and fifteen capscrews **(5)** fixing the outer race of the slew bearing to the upper frame.


: **19 mm**

4. Removing upper frame **(1)**.
   Slightly lift the upper frame to ensure safety. Then remove it and place on a worktable capable of enduring the weight.
   Weight: Approximately **900 kg** (**1984 lb**) for **E26B SR**
   Weight: Approximately **940 kg** (**2072 lb**) for **E29B SR**



TULI12EXN4982AA 2

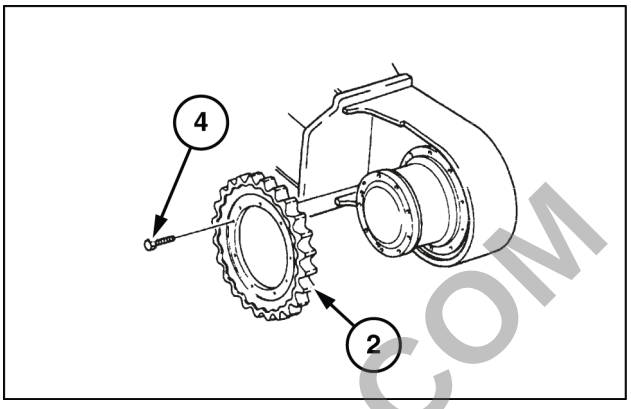
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

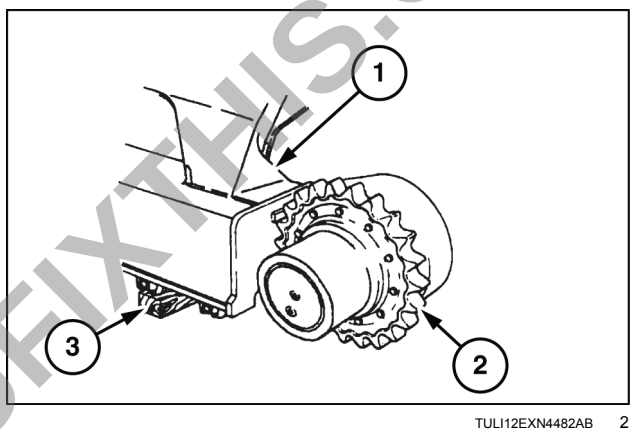
Driving wheel - Install

1. Check the fixing parts of the travel motor **(5)** and the sprocket **(2)**, eliminate burrs and dirt thoroughly, and install the sprocket **(2)**.
2. Apply **LOCTITE® 262** to the threaded portion of capscrew to mount the capscrews **(4)** and fasten then temporarily.
3. Remove the wooden block **(3)** under the lower frame **(1)** and tighten capscrews **(4)** to specified torque to fix sprocket **(2)** and travel motor **(5)**.

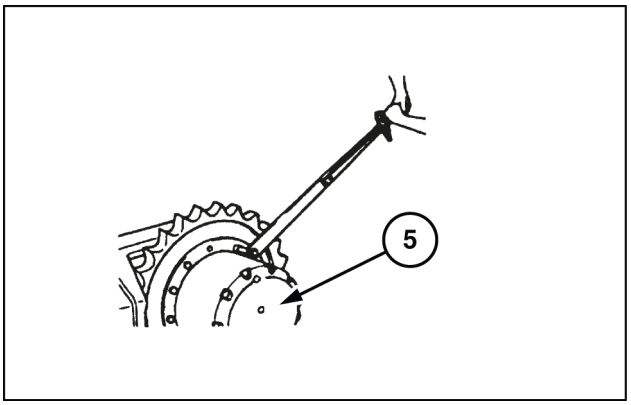
   : **8 mm**
   Tightening torque = **59 N·m** (**44 lb ft**)
4. Install crawler.



TULI12EXN4483AB 1



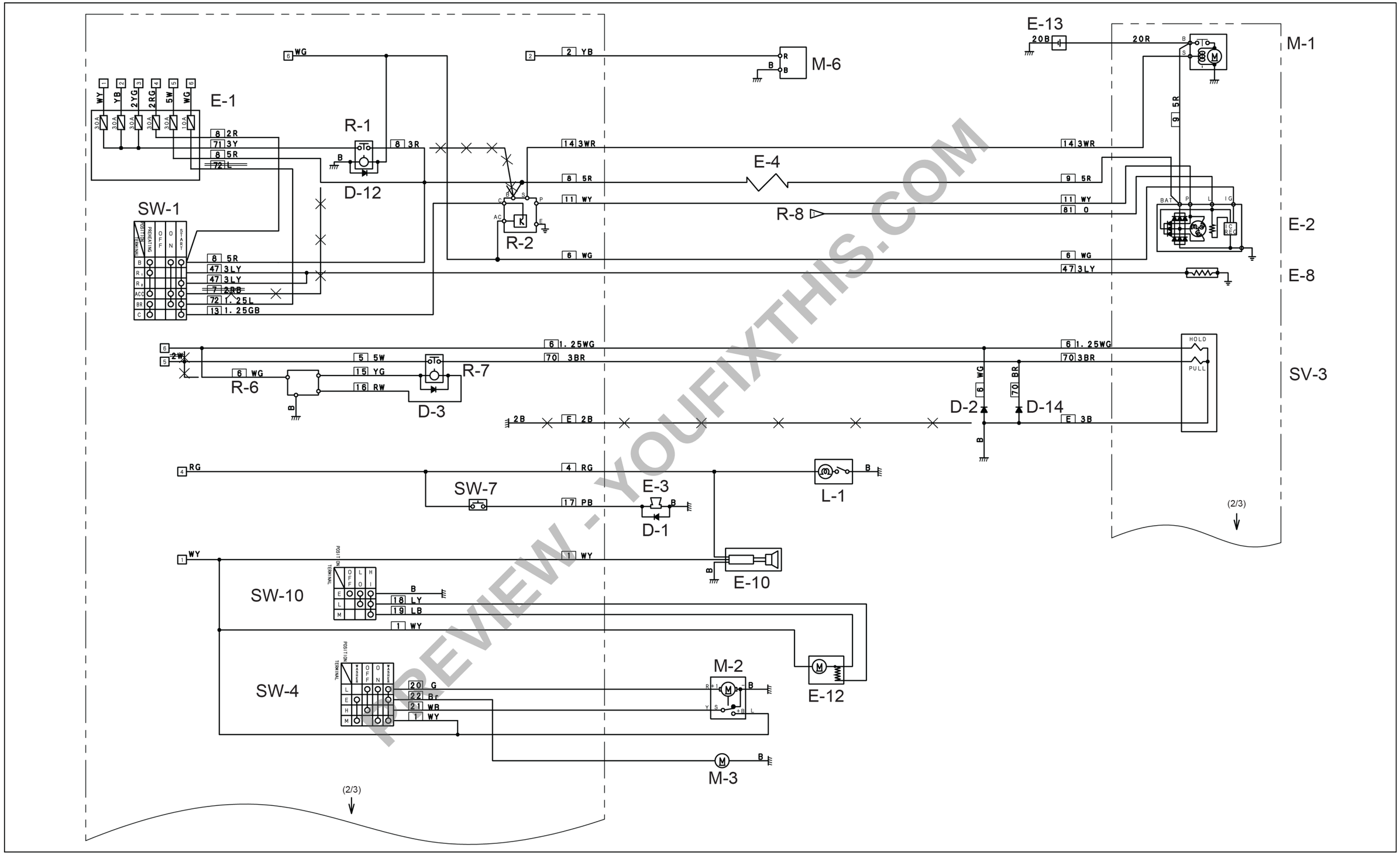
TULI12EXN4482AB 2



TULI12EXN4484AB 3

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



PREVIEW - YOUFIXTHIS.COM

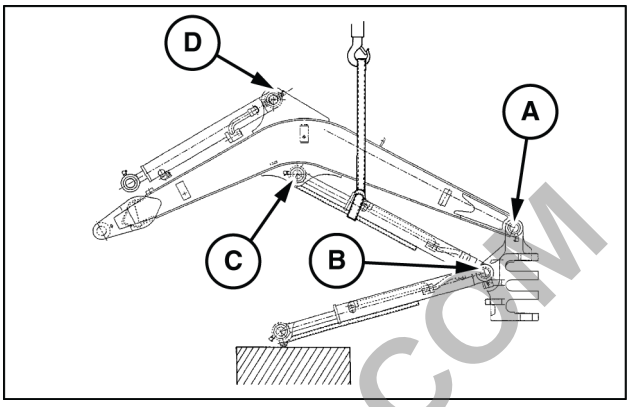
TULI12EXN5107JA 1

Download full manual at youfixthis.com

Boom - Remove

1. Get down the boom from which the arm was removed, and support the boom end with a stable stand.
2. Disconnect all hoses from the bucket cylinder, arm cylinder and boom cylinder, and apply plugs to all the openings.

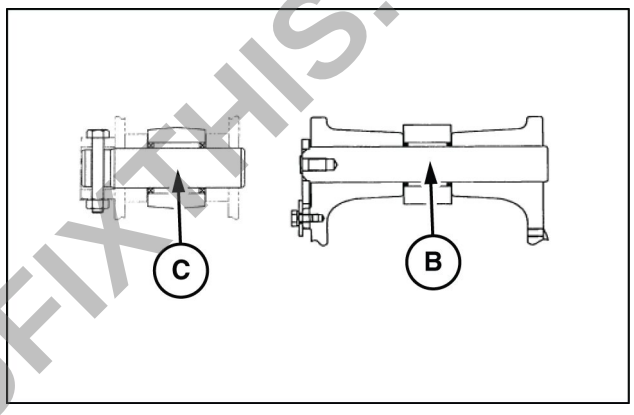
   : **22 mm**
3. Disconnect the wiring for working light at the connector.



TULI12EXN4070AC 1

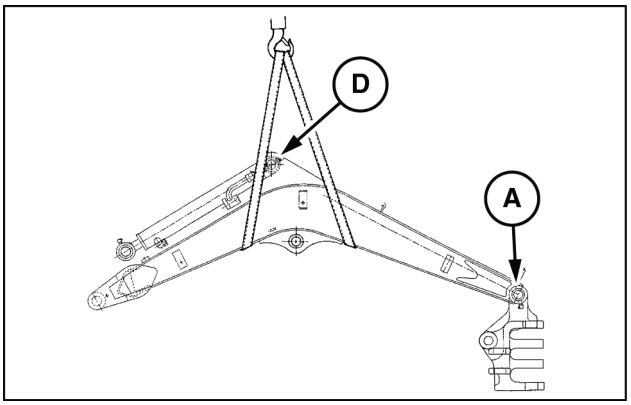
4. Removal of boom cylinder
   1. Temporarily lift up the boom cylinder with a nylon sling to prevent the boom cylinder from falling down.
   2. Removing the capscrew and nuts that are preventing the rod pin **(C)** from coming out, remove the pin **(C)**.

      : **17 mm**
   3. Retract the rod, then put the cylinder on a stable stand.
   4. Removing the capscrew that is preventing the head pin **(B)** from coming out, remove the pin **(B)**.
   5. Remove the boom cylinder. Weight:
      23 kg (**51 lb**) - **E26B SR**
      24 kg (**53 lb**) - **E29B SR**



TULI12EXN4071AB 2

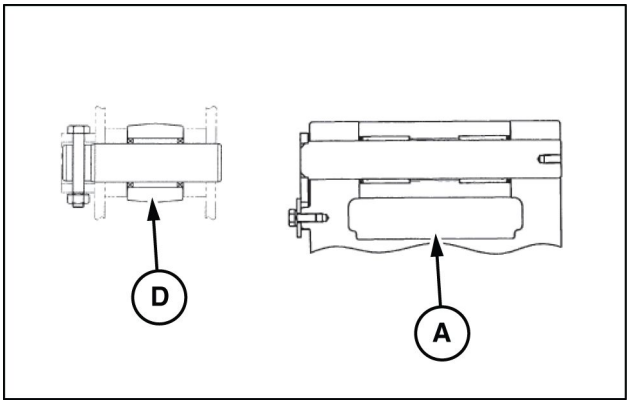
5. Removal of boom
   1. Temporarily lift up the boom assembly in order not to exert any load to the boom foot pin **(A)**.
      Weight of arm assembly: approx.
      110 kg (**243 lb**) - **E26B SR**
      125 kg (**276 lb**) - **E29B SR**
   2. Removing the capscrew that is preventing the boom foot pin **(A)** from coming out, pull off the pin **(A)**.
   3. Applying a sling to the boom assembly, remove the boom assembly.



TULI12EXN4072AC 3

6. Removal of arm cylinder
   1. Removing the capscrew and nuts that are preventing the head pin **(D)** from coming out, remove the pin **(D)**.

      : **17 mm**
   2. Applying a nylon sling to the tube of arm cylinder, remove the arm cylinder.
      Weight:
      22 kg (**49 lb**) - **E26B SR**
      28 kg (**62 lb**) - **E29B SR**



TULI12EXN4073AC 4

PREVIEW - YOUFIXTHIS.COM

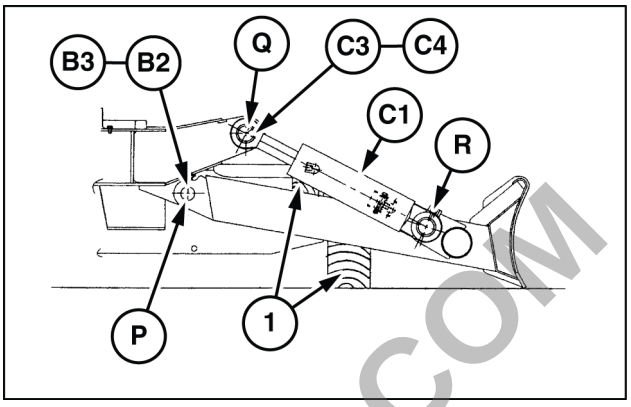
Download full manual at youfixthis.com

Dozer blade - Install

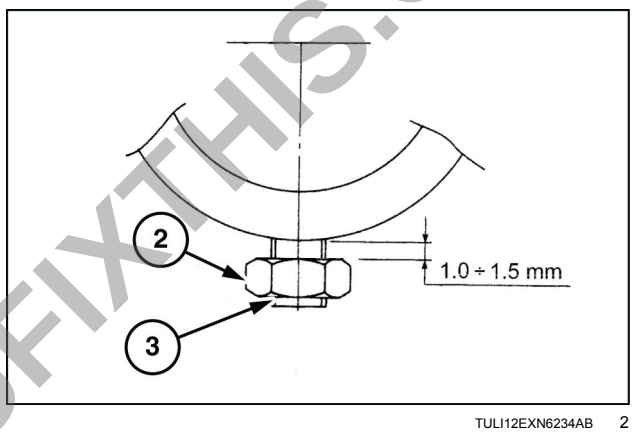
The installation is carried out with the reverse order of the removal paying attention for the following.

1. Replace the worn-out pin and bushing to new ones.
2. Before installing pin **(P)**, **(Q)** and **(R)**, apply grease to their shaft area.
3. Install the nuts **(2)** for capscrew **(3)** to prevent the pin from coming out.

: **17 mm**



TULI12EXN4079AB 1



TULI12EXN6234AB 2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Cab and platform - Remove

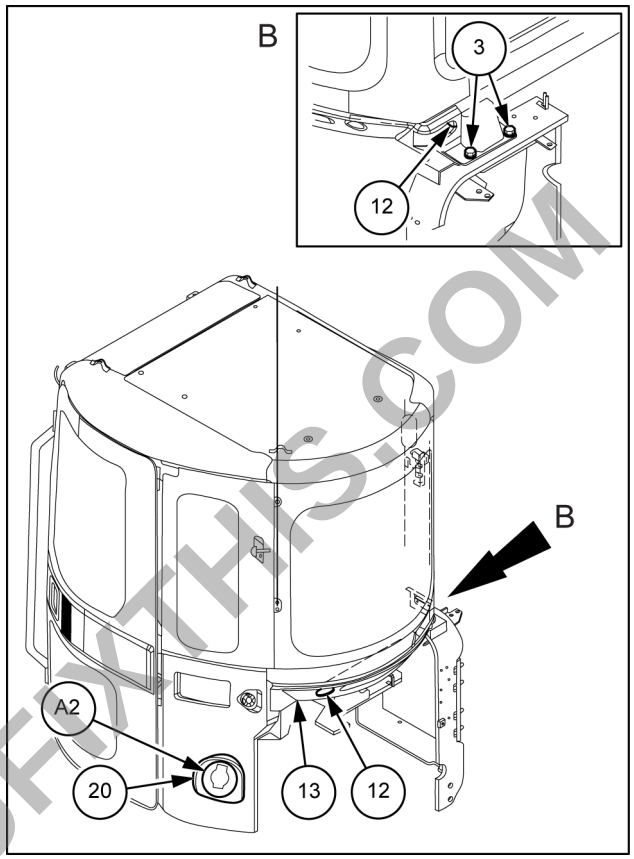
1. Remove the fuel filler cap **(A2)** and rubber cover **(20)**.
2. Removing cover installed on rear of cab. Loosen three sems-screws **M6 x 25 (12)** for installing the cover **(13)**.

   : plus screwdriver
3. Removing cab mounting screws. Loosen six cap-screws for mounting the cab.

Two capscrews **(1) M16 x 100**
One capscrew **(2) M16 x 50**
Three capscrews **(3) M16 x 55**

: **19 mm** and **24 mm**

An extension tool about **1 m** (**3.28 ft**) long is required for removing the capscrew item **(1)** (with mark *).



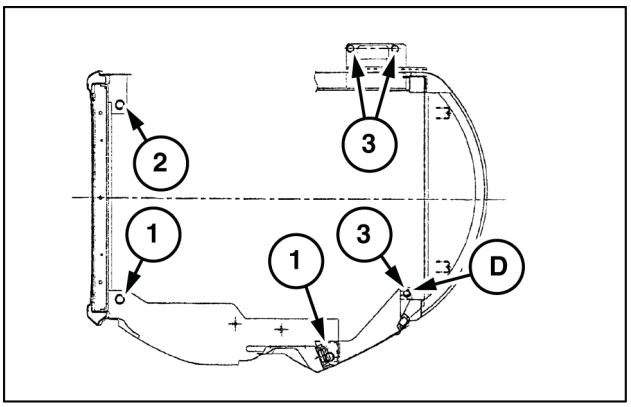
SMIL13MEX0276BB 1

Lifting cab

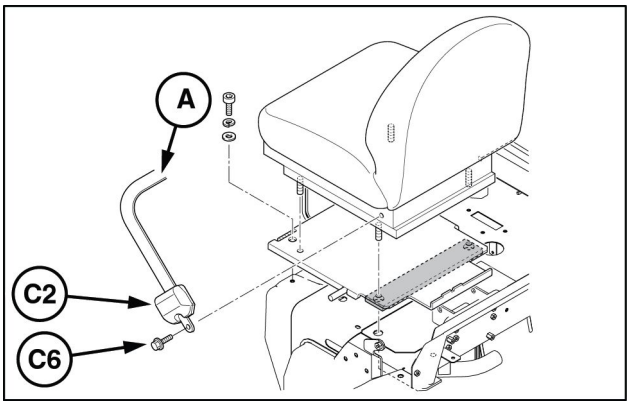
1. Loosen the sems-screws **M10 x 20 (C6)** to remove the seat belt assembly **(C2)** in advance to prevent it from interfering with the cab during lifting.

   : **17 mm**
2. Put slings through the lifting eyes on the cab top and lift up.
   Cab weight: **210 kg** (**463 lb**)

D. Adjust the clearance between guard and cab rear bracket with shims (t1.2, 2.0, 3.2).



TULI12EXN8289AB 2



TULI12EXN4205AB 3

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

[35.738] Excavator and backhoe bucket hydraulic system 35.12
[35.739] Swing arm hydraulic system 35.13
[35.741] Dozer blade cylinders 35.14
Frames and ballasting 39
[39.101] Upper frame 39.1
[39.103] Swing ring assembly 39.2
[39.140] Ballasts and supports 39.3
Tracks and track suspension 48
[48.130] Track frame and driving wheels 48.1
[48.100] Tracks 48.2
[48.134] Track tension units 48.3
[48.138] Track rollers 48.4
Electrical systems 55
[55.000] Electrical system 55.1
[55.100] Harnesses and connectors 55.2
[55.015] Engine control system 55.3
[55.201] Engine starting system 55.4
[55.301] Alternator 55.5
[55.302] Battery 55.6
[55.011] Fuel tank system 55.7
[55.013] Engine oil system 55.8
[55.404] External lighting 55.9
[55.510] Cab or platform harnesses and connectors 55.10
Booms, dippers, and buckets 84
[84.114] Boom pivoting support 84.1
[84.910] Boom 84.2
[84.912] Dipper arm 84.3
[84.100] Bucket 84.4

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

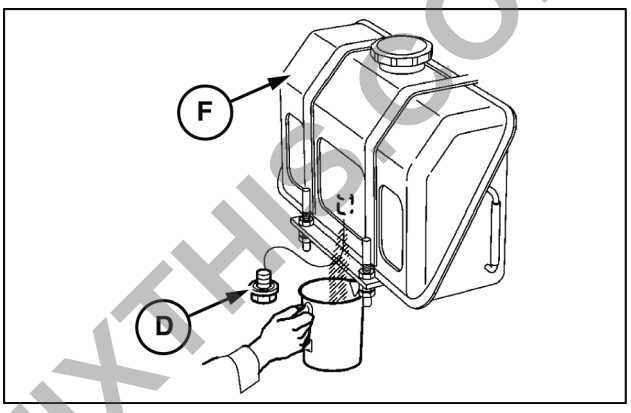
Engine - Inspect – Every 50 hours

Be sure to check the following points before starting an engine every day.

No.	Inspection item
1.	Fuel tank drain
2.	Fuel system bleeding
3.	Battery electrolyte level check and battery recharging

Fuel tank drain

1. Prepare a waste oil container collecting waste oil.
2. Remove the drain plug **(D)** of the fuel tank **(F)** to drain (water, dust, etc.) from the fuel tank bottom.
3. Drain until fuel with no water and dust flow out. Then tighten the drain plug firmly.



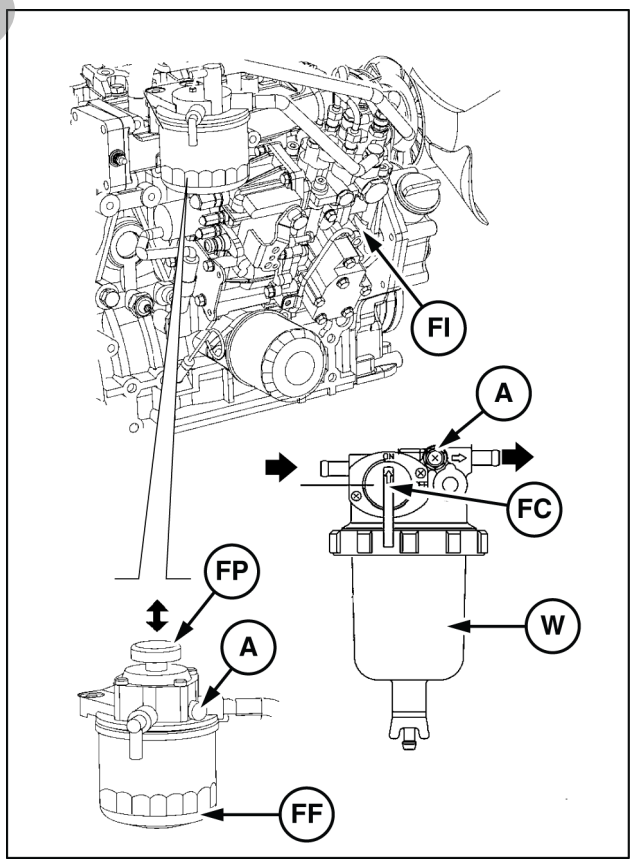
TULI12EXN4794AB 1

Fuel system bleeding

Bleed the fuel system according to the following procedures. When there is air in the fuel system, the fuel injection pump **(FI)** will not be able to operate.

1. Check the fuel oil level in the fuel tank. Refuel if insufficient.
2. Open the cock **(FC)** of the water separator **(W)**.
3. Loosen the air bleeding bolt **(A)** on the water separator by turning counterclockwise 2 -3 times using a screwdriver or a spanner.
4. When the fuel coming out is clear and not mixed with any bubble, tighten the air bleeding bolt **(A)**.
5. Feed fuel with the fuel priming pump **(FP)** or electro-magnetic fuel feed pump.

- In case the engine uses the electro-magnetic fuel feed pump.
  Turn the starter switch to the “ON” position and hold it in the position for **10 - 15 s** to operate the fuel feed pump.
- In case the engine uses the electro-magnetic fuel feed pump **(FP)**.
  The priming pump is on the top of the fuel filter mounting. Move the priming pump up and down to feed fuel until feel your hand slightly heavy.
- Water separator **(W)**
  (Installed on the pipe line)
- Fuel filter **(FF)**
  (Mounting with fuel priming pump) (option)



TULI12EXN4796BB 2

Download full manual at youfixthis.com

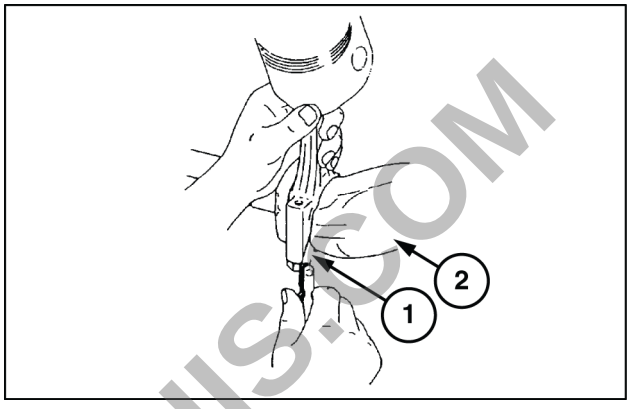
Engine oil pan - Disassemble

Point 1: Oil pan

Disassembly

Sealant is applied to the oil pan mounting surface on the block. Carefully operate so as not to damage or distort the bonding surface.

1. Thickness gauge
2. Crankshaft



TULI12EXN5013AB 1

Reassemble

Apply sealant before reassembly.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Contents

Engine - 10

Crankshaft and flywheel - 103

TECHNICAL DATA

Crankshaft and flywheel
Service limits 3
Crankshaft
Service limits 4

SERVICE

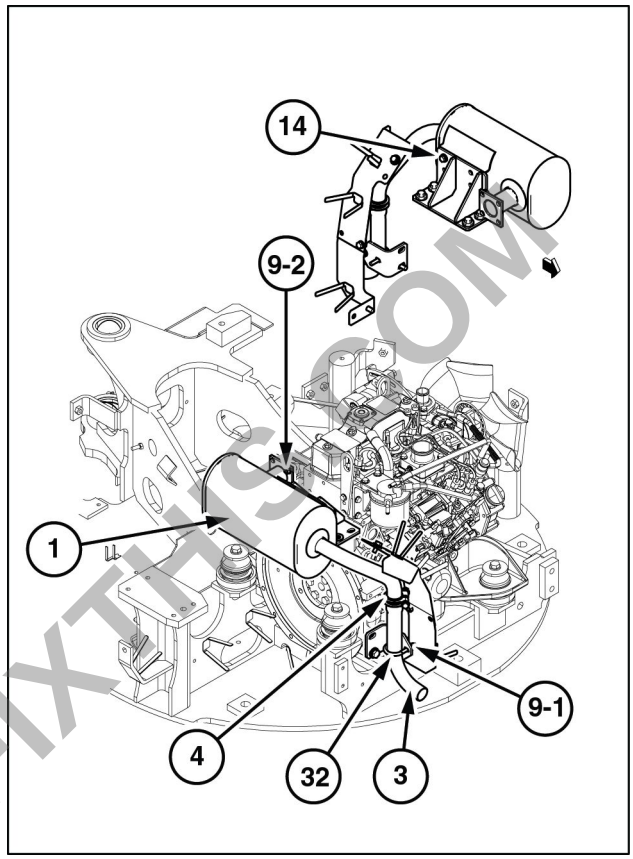
Crankshaft and flywheel
Disassemble 8
Crankshaft oil seal
Replace 12

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Intake and exhaust manifolds and muffler - Install

Install the muffler in reverse order of the removal and tighten the screws and nuts to the specified torque shown in the following table:

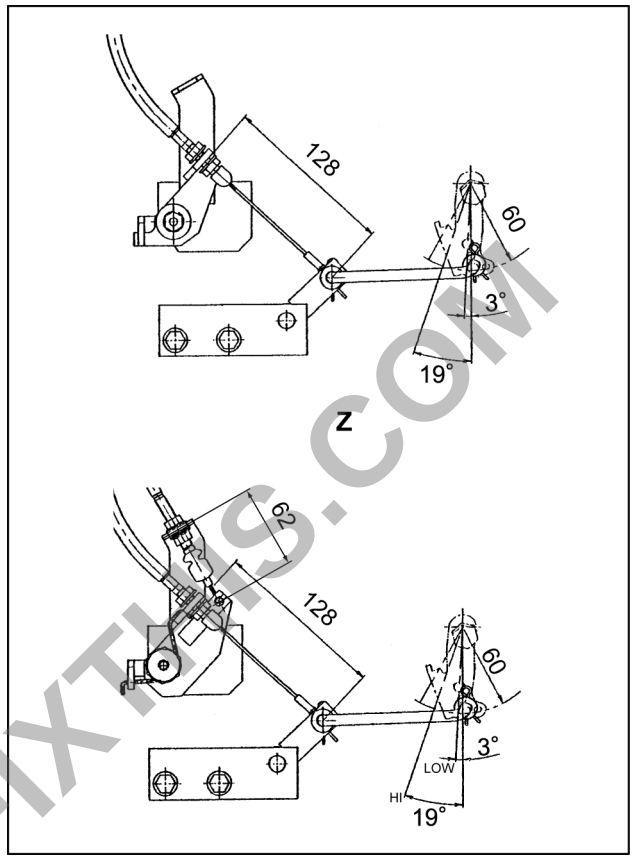


TULI12EXN4944BB 1

Piece	Name	Tool	Torque
4	Screw **M10**	**17 mm**	**23.5 N·m** (**17.3 lb ft**)
9-1	Nut **M8** for U-bolt	**13 mm**	**10.8 N·m** (**8.0 lb ft**)
9-2	Nut **M8** for manifold	**13 mm**	**23.5 N·m** (**17.3 lb ft**)
14	Screw **M8**	**13 mm**	**23.5 N·m** (**17.3 lb ft**)

PREVIEW ONLY YOUFIXTHIS.COM

Download full manual at youfixthis.com



TULI12EXN4117BA 4

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Pump - Assemble

Cautions for assembling

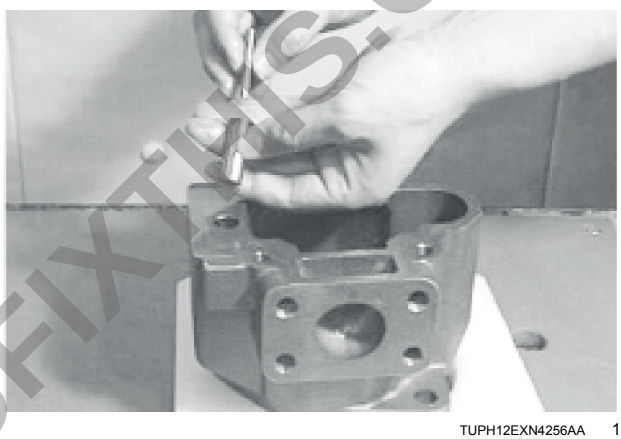
1. Wash each part thoroughly.
2. During disassembling, take utmost care not to damage the part or allow foreign materials to enter.
3. As a rule, the O-ring and oil seal should not be reused.
4. In out assembly work, the torque wrench is used to control the torque. Be sure to use the torque wrench.

Assemble the main pump in reverse order of disassembly.

Assembly of main pump

1. Assembling housing section

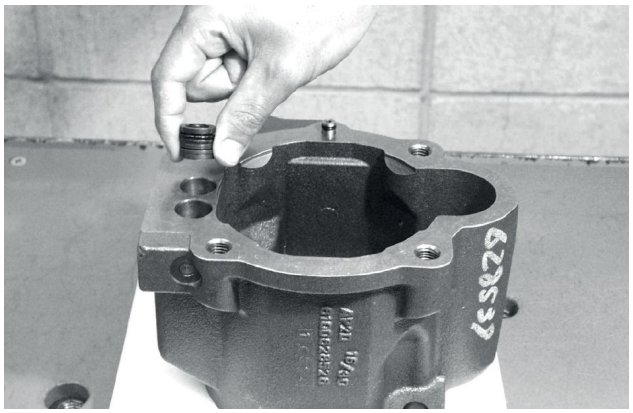
   A. Install the parallel pin and sleeve (Ø **5 mm** (**0.20 in**)) of the **P3** shift side into the housing.



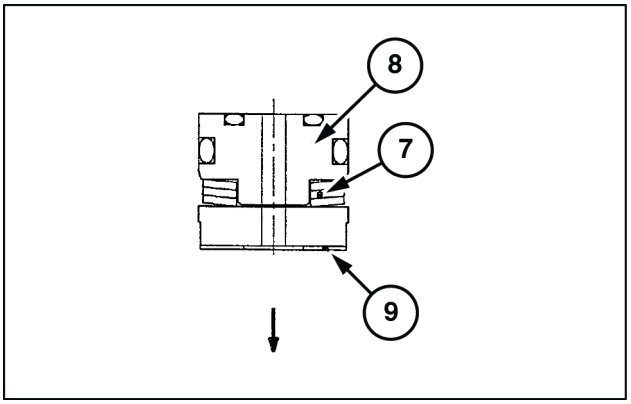
TUPH12EXN4256AA 1

   B. Install the piston **(8)**, coned disk spring **(7)**, distance piece and shim **(9)** into housing.

- Be careful to the orientation of the disk spring **(7)**.



TUPH12EXN4257AA 2



TULI12EXN4989AB 3

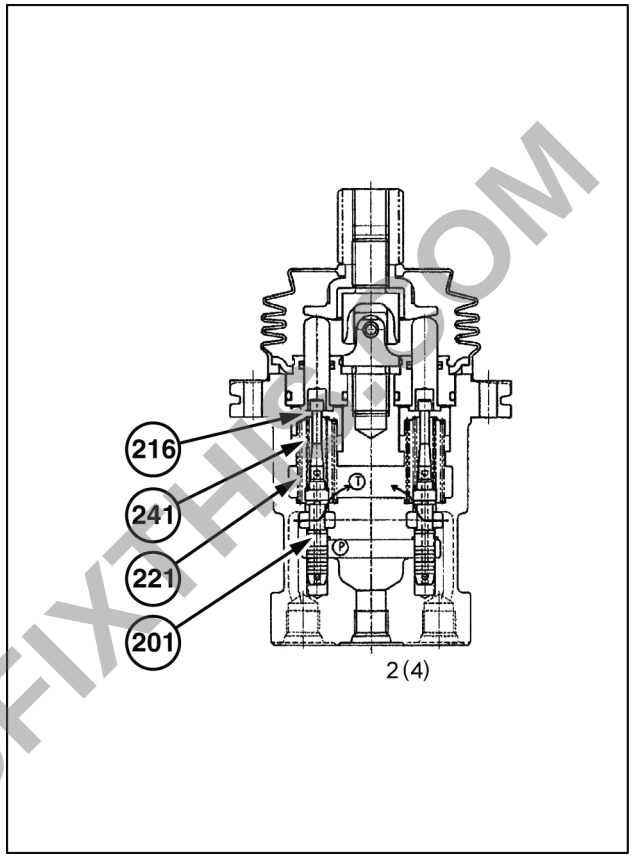
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Hand control - Dynamic description

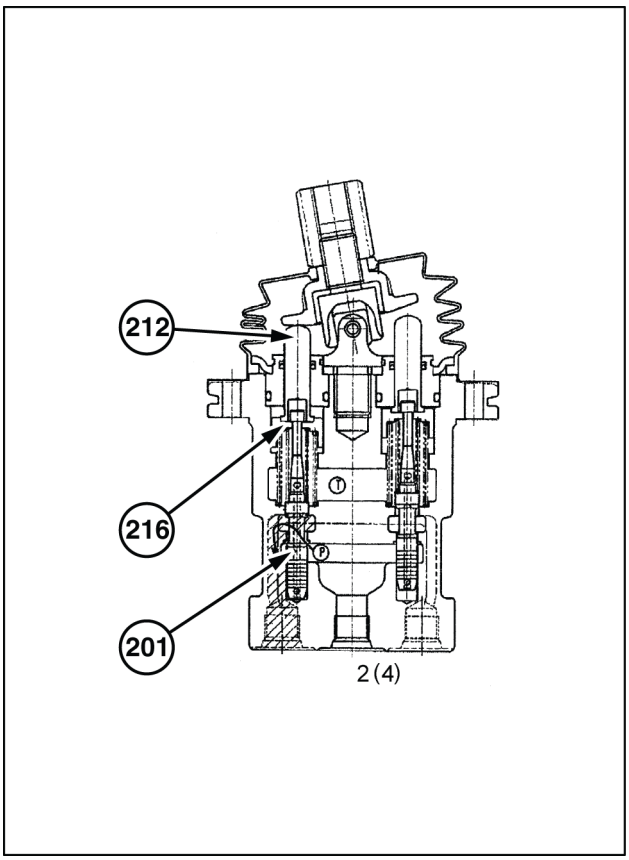
Operation

Lever in neutral position. In this case, the force of the secondary pressure setting spring **(241)** that determines the output pressure of the pilot valve is not transmitted to the spool **(201)**. Accordingly, the spool **(201)** is pushed up by the return spring **(221)** and spring seat **(216)** permitting the output port **2**, **4** to connect with the tank port **T**. This makes the output pressure equal to the tank pressure.



TULI12EXN4164BB 1

When the Lever is tilted. When the lever is tilted, the push rod **(212)** strokes. The spool **(201)** and spring seat **(216)** moves downward to make the port **P** to connect with the port **2**, **4**. With the result that the oil of the pilot pump flow out to the port **2**, **4**, to produce a pressure.



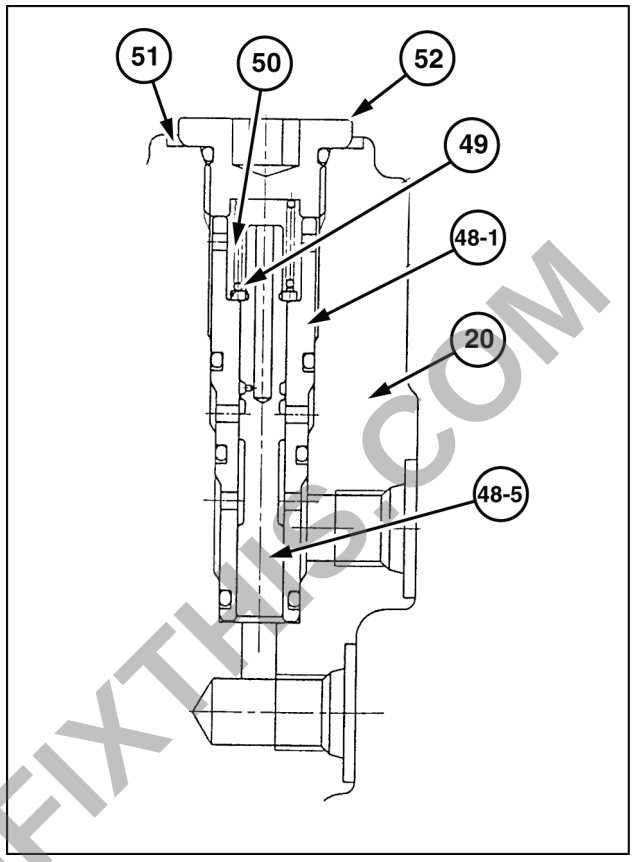
TULI12EXN4165BB 2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

11. Install sleeve **(48-1)** on case **(20)**, and place spool **(48-5)** , washer **(49)** and spring **(50)** in the hole of the sleeve.
12. Install plug **(52)** with O-ring **(51)**.
    T = **79 - 89 N·m** (**58.27 - 65.64 lb ft**)

NOTE: *Fit the O-ring **(51)** with care, without damaging it.*

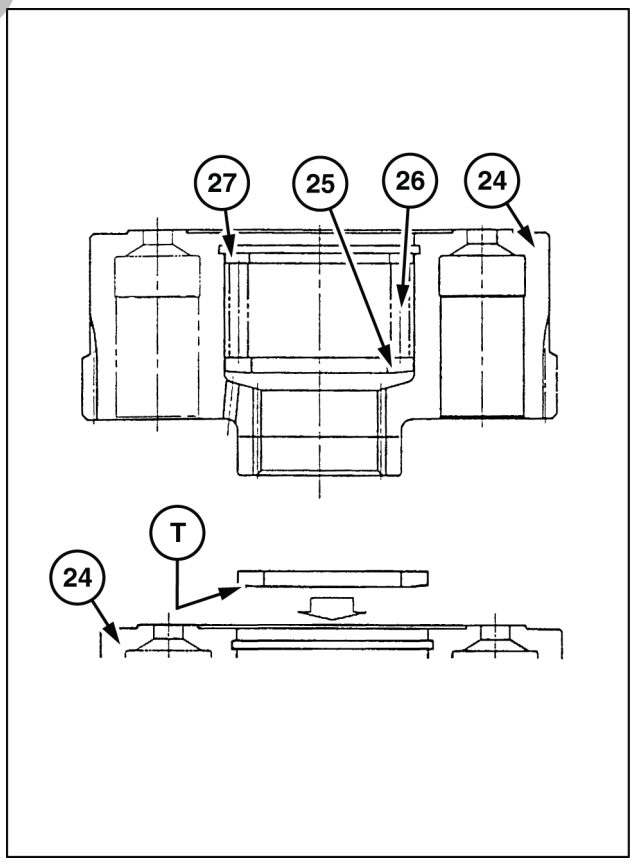


TULI12EXN4378BB 5

13. Install collar **(25)**, spring **(26)** and washer **(27)** on cylinder block **(24)**.

NOTE: *Do not mistake the direction of installation*

T. Taper surface.



TULI12EXN4379BB 6

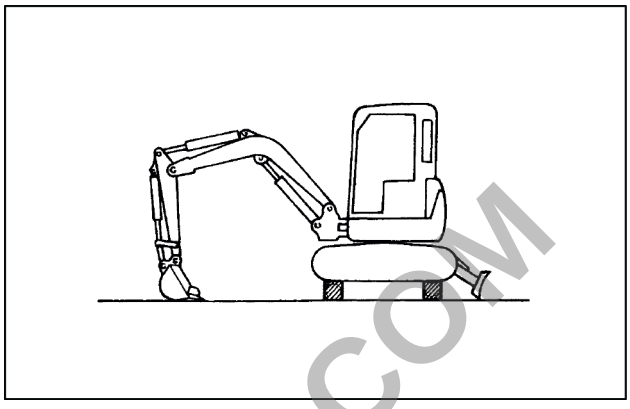
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

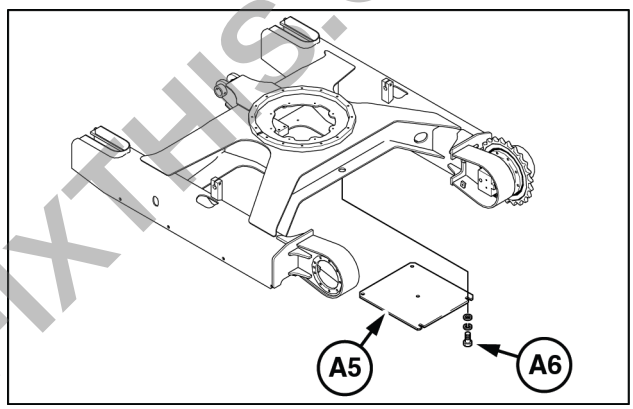
Hydraulic central joint - Prepare

1. Lift the machine by approximately **30 cm** (**11.81 in**) and insert support blocks under the crawlers, namely front, rear, right and left, to secure the working area under the machine.
2. Remove the cover of the floor plate.
3. Loosen four **M10 x 18** capscrews **(A6)** to remove the under cover **(A5)**.

   : **17 mm**
4. Release the residual pressure in the circuit and the hydraulic tank.
5. Disconnect the hose of the slewing motor.
   - Remove the canopy to facilitate to remove the swivel joints.



TULI12EXN4971AA 1



TULI12EXN4972AB 2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Hydraulic systems - 35

Swing arm hydraulic system - 739

E26B SR
E29B SR

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Index

Tracks and track suspension - 48

Tracks - 100

Rubber track - Install 13
Rubber track - Remove 12
Track chain - Install 10
Track chain - Remove 8
Tracks - Component identification 7
Tracks - General specification 3
Tracks - Service limits 4

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

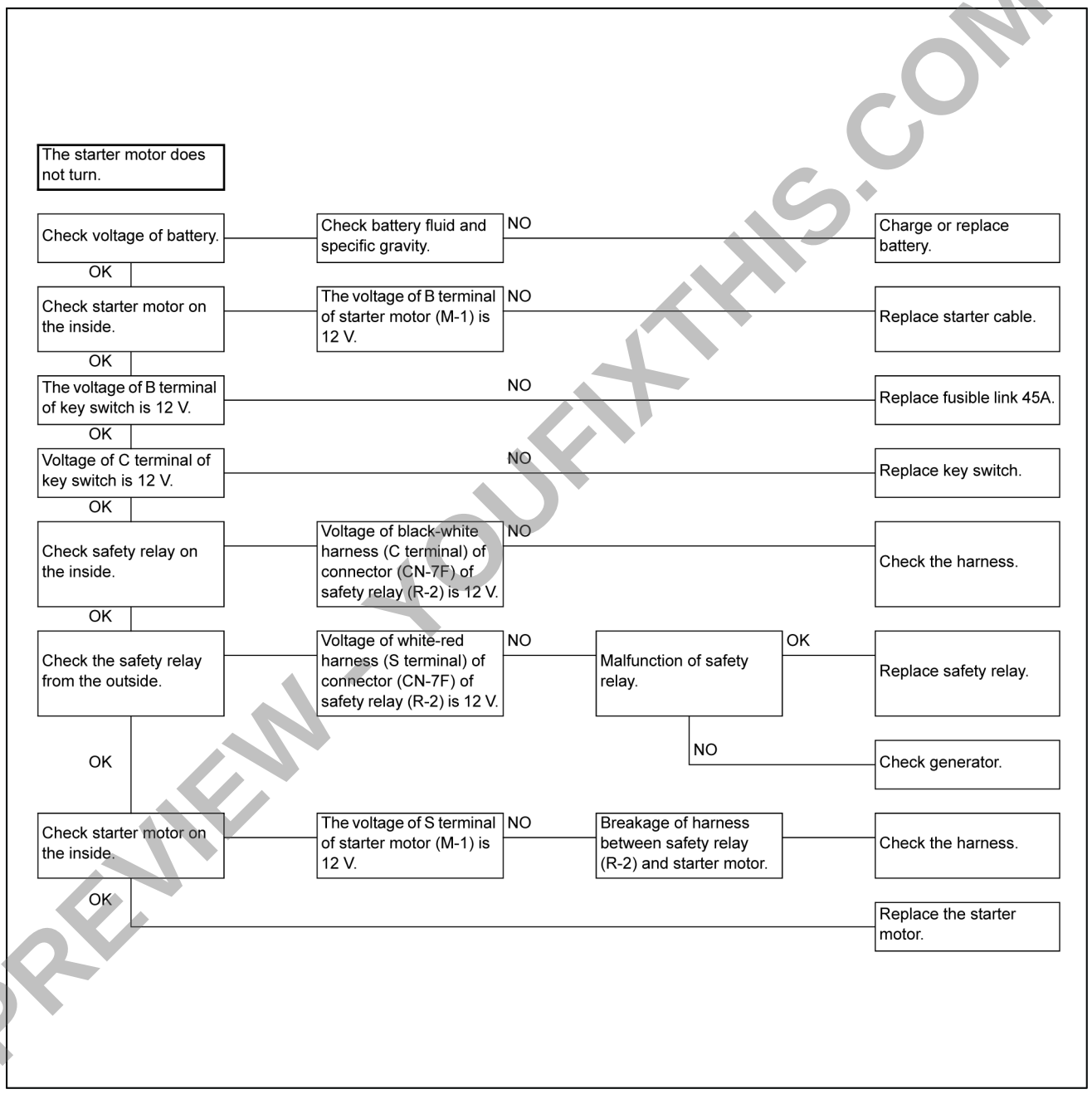
Abbreviations

Decel: Deceleration

SOL: Solenoid

General

Engine does not start



TULI12EXN4504GA 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Index

Electrical systems - 55

Engine starting system - 201

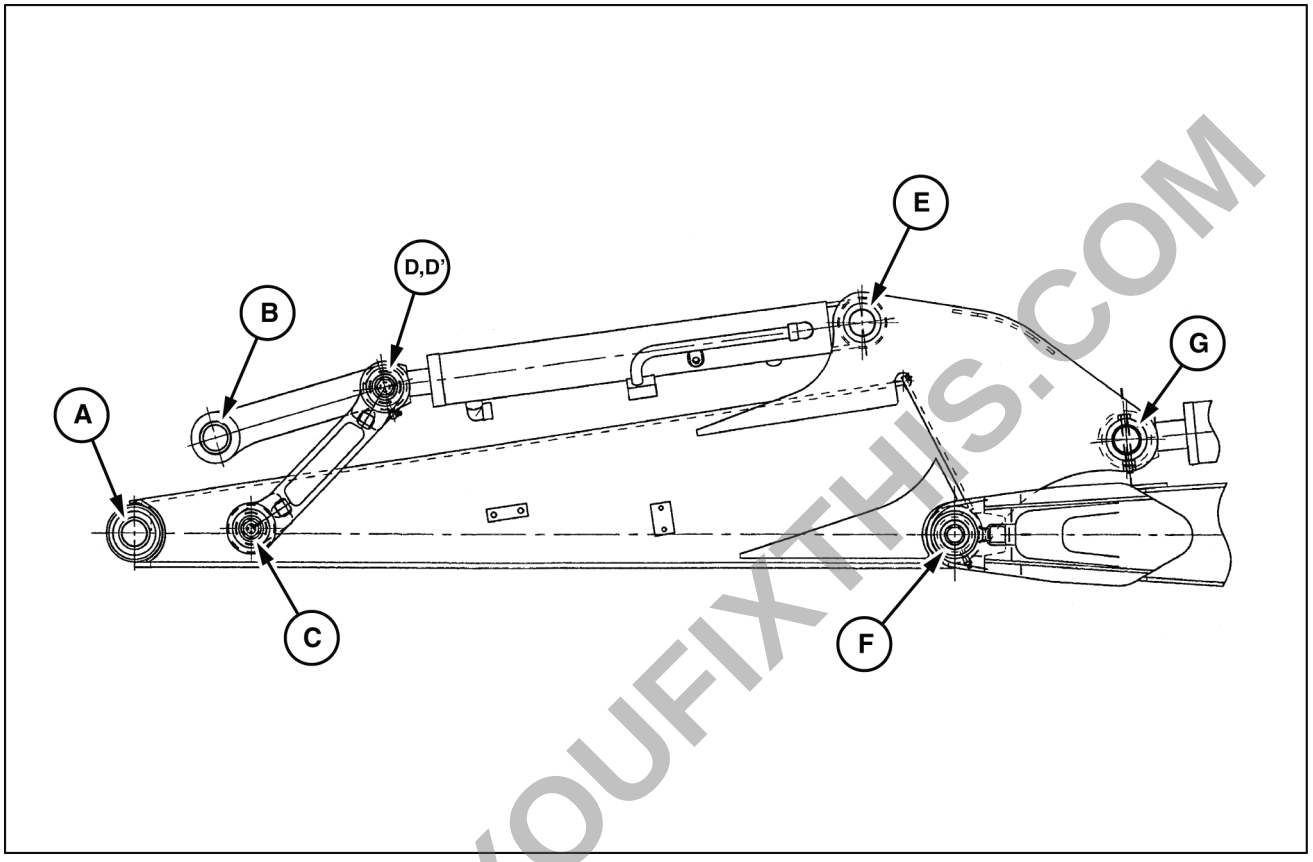
Engine starter - Adjust – 4TNV106(T) 41
Engine starter - Assemble 25
Engine starter - Assemble 40
Engine starter - Component identification – 4TNV106(T) 9
Engine starter - Component identification – 4TNV94L/98 7
Engine starter - Disassemble – 4TNV106(T) 29
Engine starter - Disassemble – 4TNV94L/98 16
Engine starter - Exploded view – 4TNV106(T) 11
Engine starter - Exploded view – 4TNV94L/98 10
Engine starter - General specification – 4TNV106(T) 4
Engine starter - General specification – 4TNV94L/98 3
Engine starter - Inspect – 4TNV106(T) 34
Engine starter - Inspect – 4TNV94L/98 19
Engine starter - Install 14
Engine starter - Prepare 12
Engine starter - Remove 13
Engine starter - Service instruction – 4TNV106(T) 28
Engine starter - Service instruction – 4TNV94L/98 15
Engine starter - Service limits – 4TNV106(T) 6
Engine starter - Service limits – 4TNV94L/98 5
Engine starter - Test – 4TNV94L/98 27

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Dipper arm - Service limits

Clearance of pin and bushing



TULI12EXN4105FB 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 25 of 1075 pages

The full manual includes:

- All 1075 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

New Holland E26B SR, E29B SR Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual