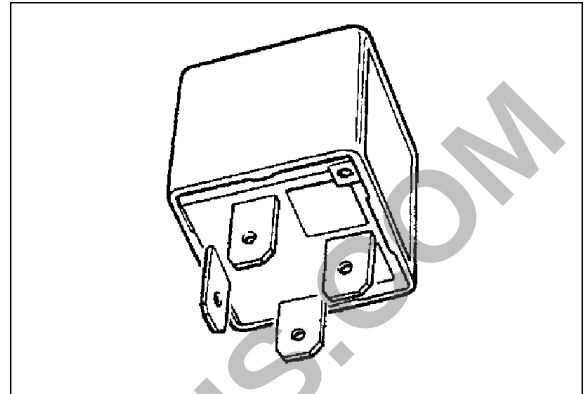


kept apart by a return spring. When the control circuit is switched on, a current flows through the coil and a magnetic force is produced. This force, which is stronger than the spring pressure, pulls the contacts of the relay together, causing the work circuit to operate.

A switch-relay system has two main advantages over a simple switch:

- The current that flows through the switch is not the same as all the current requested by the equipment to be operated, but usually by a smaller current: this allows the usage of smaller and less expensive switches;
- The distance from the supply, to the equipment, can be made as short as possible to minimize voltage drop.

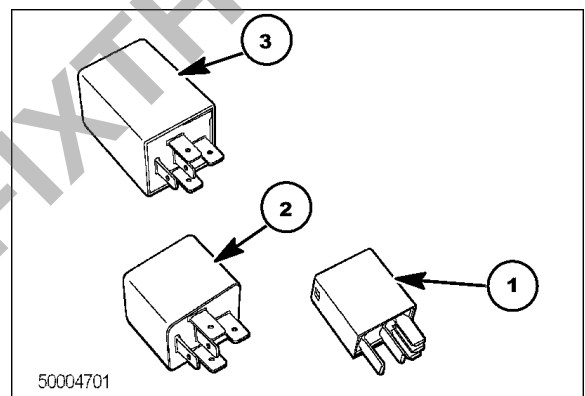


55_3_55_3_37 14

There are different styles of relays used on these combines. The micro relay (1) is the most commonly used relay, the mini relay (2) and the time delay relay (3). On the relay cover there are terminal markings:

3 or 30: input terminal direct from battery positive, normally live.

- 2 or 85: winding output terminal, usually to ground.
- 1 or 86: winding input terminal.
- 4 or 87: output terminal for normally closed contact.
- 5 or 87a: output terminal for normally open contact.



50004701

55_3_55_3_38 15

Solenoids

Solenoids work in much the same way as relays, except that the iron core is not fixed in place. As a result, the windings in the control circuit cause the iron core to move.

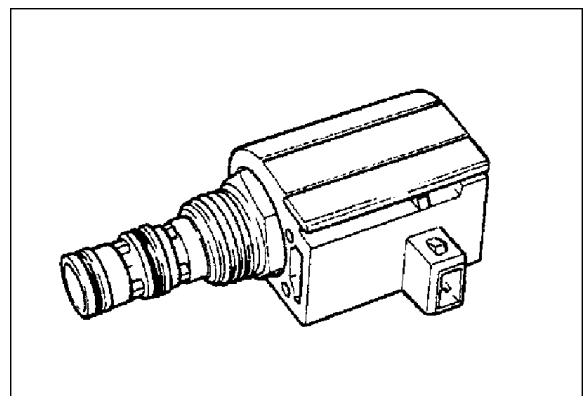
In the starting system, for example, the movement of this core is used to send large amounts of current to the starter motor.

A solenoid is basically a winding around an iron core. In the centre of the core there is a plunger which is free to move through the core. When an electrical current passes through the winding an electro-magnetic force is produced which causes the plunger to move through the core. If the current is switched off, the magnetic force is stopped and the plunger is returned by a spring.

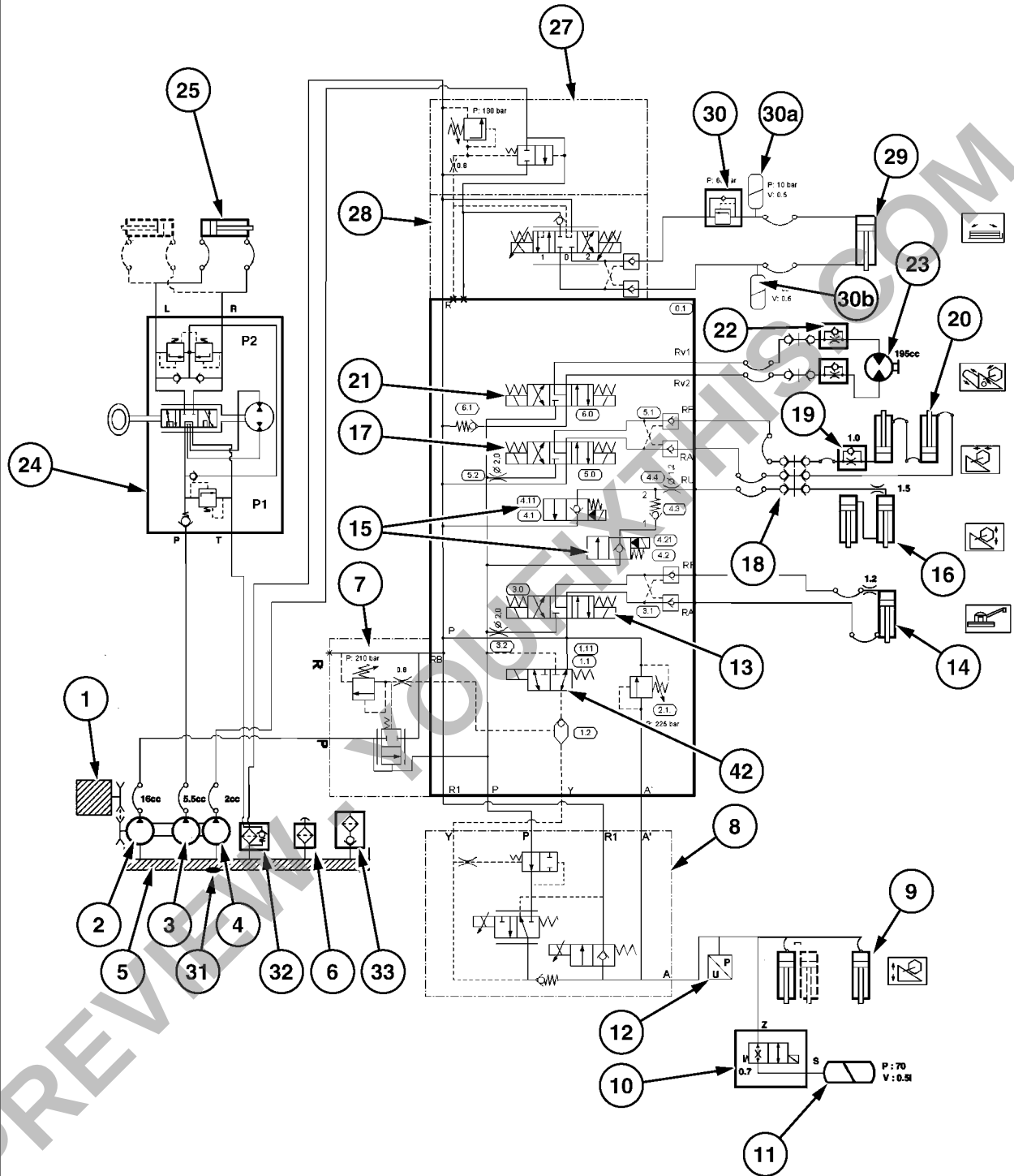
The solenoid plunger may have different uses: the most common are moving a hydraulic spool or a mechanical lever.

The MOST COMMON FAULTS that can occur are:

- Short circuit winding: if a section of the winding allows the current to pass directly from positive (+) to negative (-) terminals without passing through the winding, this will cause the relevant circuit fuse to blow.

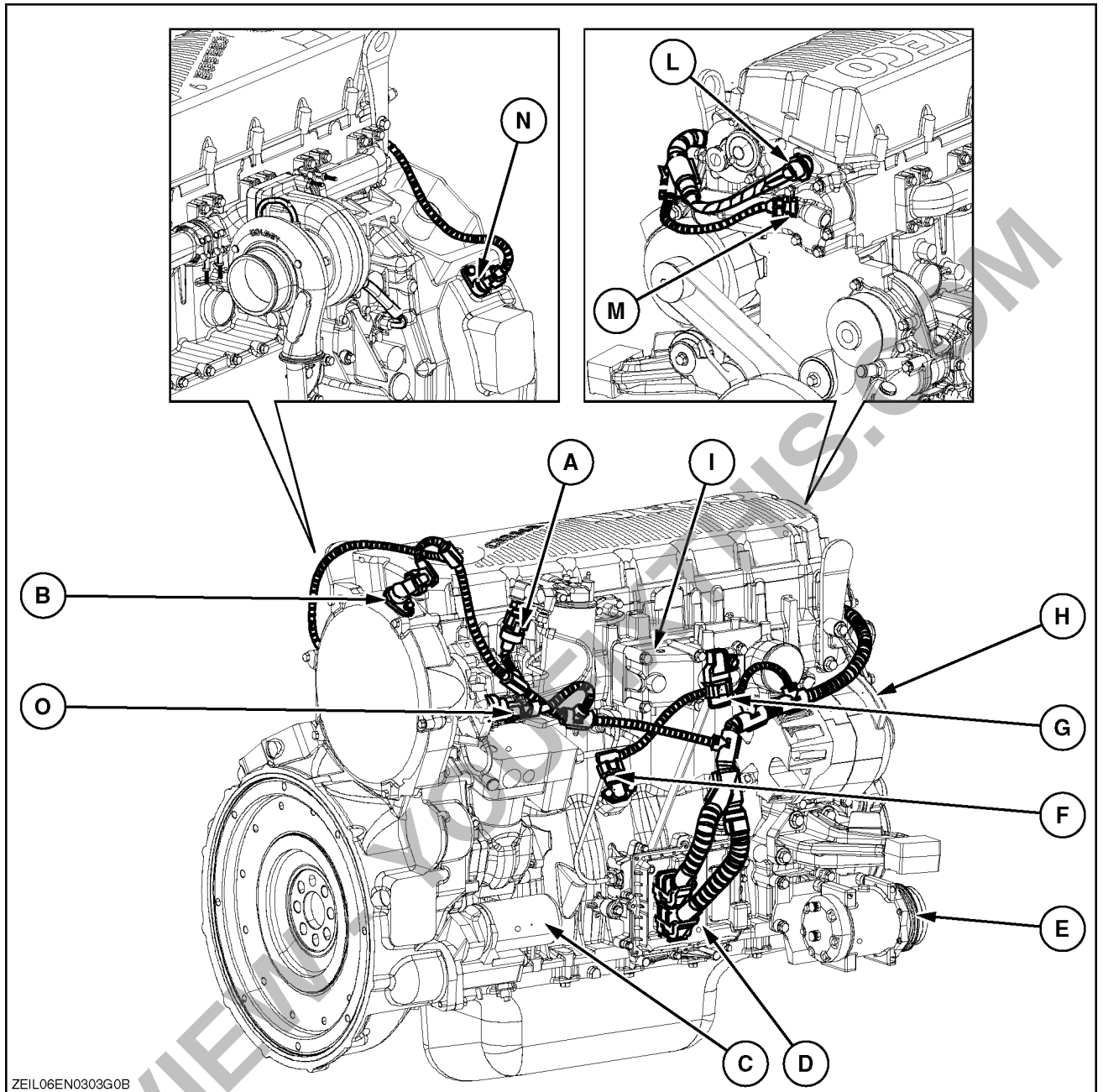


50004701 16

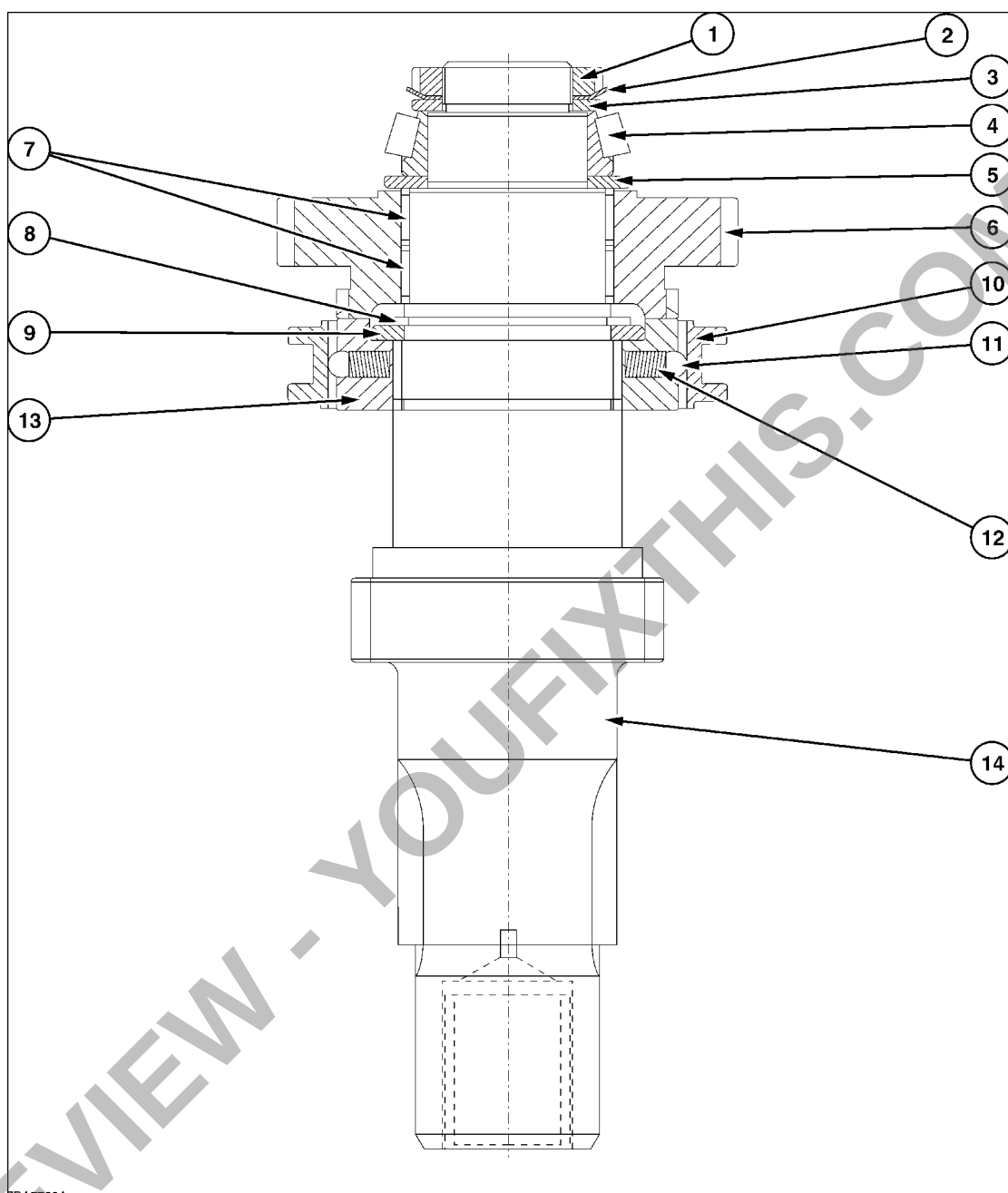


ZEIL06CS0168H0C

ZEIL06CS0168H0C 1



Shaft Input shaft - Sectional view



ZDA7729A

ZDA7729A 1

Input shaft

- 1 Nut
- 3 Washer
- 5 Washer
- 7 Needle bearing
- 9 Washer
- 11 Ball
- 13 Selector housing

- 2 Lock washer
- 4 Bearing
- 6 Gear
- 8 Retaining ring
- 10 Selector ring
- 12 Spring
- 14 Input shaft

- | | |
|------------------|-----------------|
| 1. Seal | 2. Bearing |
| 3. Spacer | 4. Output gear |
| 5. Spacer | 6. Bearing |
| 7. Shims | 8. Flange |
| 9. Bolts | 10. Cover |
| 11. Cover | 15. Bolts |
| 16. Flange | 17. Gasket |
| 18. Bearing | 19. Input shaft |
| 20. Output shaft | 21. O-ring |
| 22. Seal | 23. Shims |
| 24. Flange | 25. Allen screw |

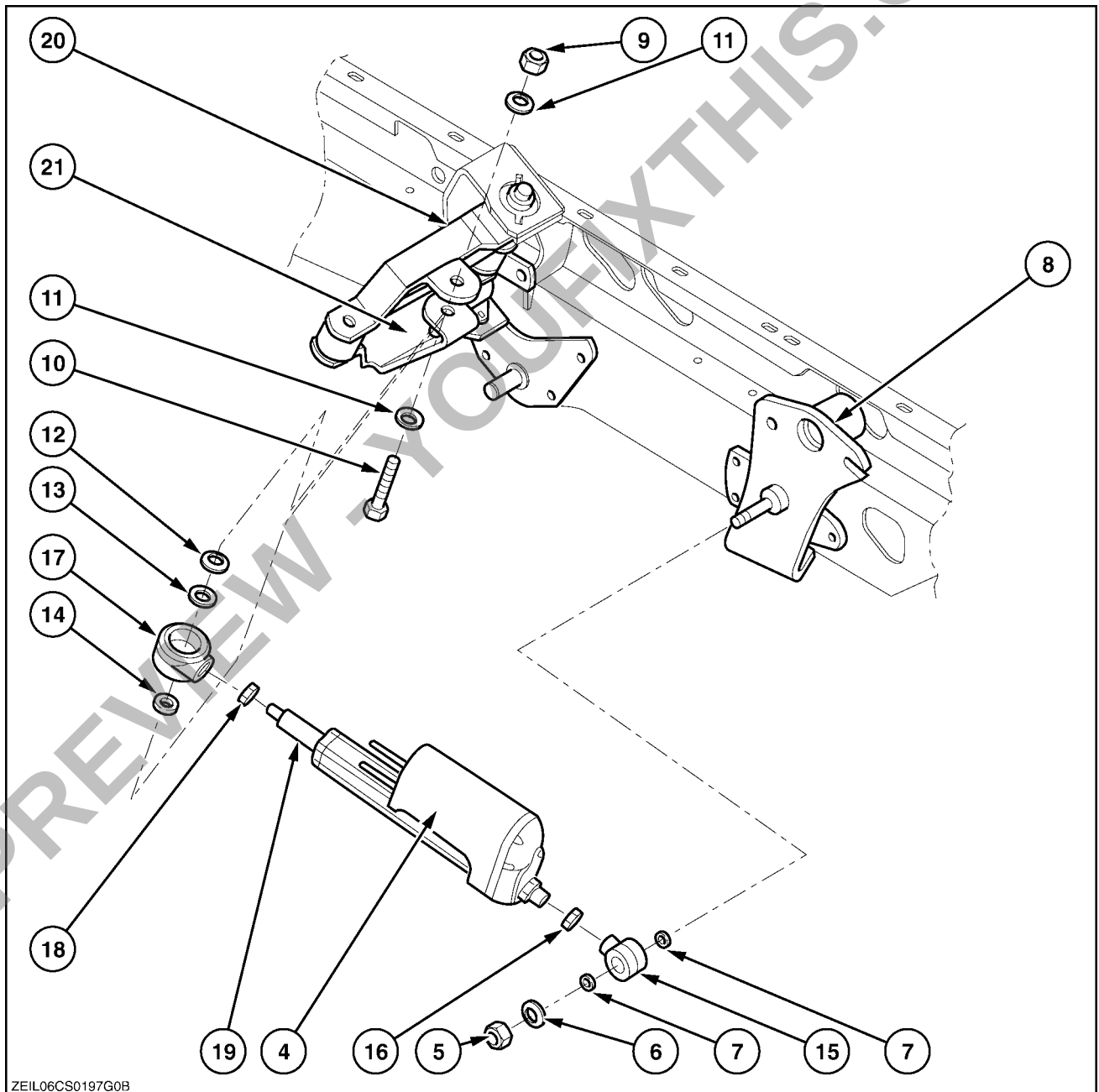
PREVIEW - YOUFIXTHIS.COM

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Upper sieve levelling system Motor - Exploded view

CSX7060, CSX7080, CSX7060 Laterale, CSX7080 Laterale, CSX7040, CSX7050, CSX7050 Laterale, CSX7070

- | | |
|-----------------|-----------------|
| 1. | 12. Flat washer |
| 2. | 13. Shim |
| 3. | 14. Spacer |
| 4. Actuator | 15. Hinge joint |
| 5. Nut | 16. Nut |
| 6. Lock washer | 17. Hinge joint |
| 7. Spacer | 18. Nut |
| 8. Pivot arm RH | 19. Piston |
| 9. Nut | 20. Bracket |
| 10. Bolt | 21. Bracket |
| 11. Lock washer | |



ZEIL06CS0197G0B

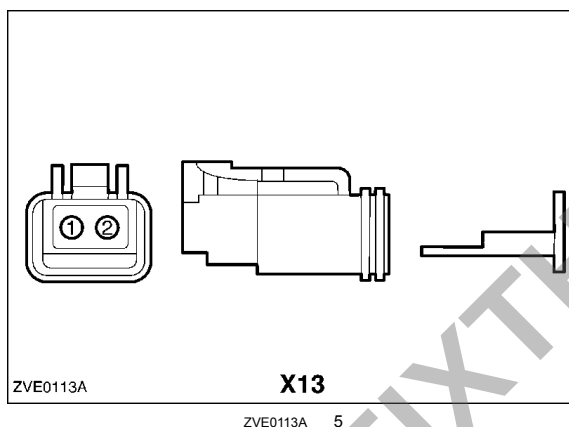
ZEIL06CS0197G0B 1

PREVIEW - YOUFIXTHIS.COM

In-line harness connector (powered rear axle solenoid Y22)

Connector X13 In-line harness connector (powered rear axle solenoid Y22)			
Position	Wire number	Circuit reference	Electrical schematic frame
1	508 (WT)	Powered rear axle solenoid signal	Wiring harness - Electrical schematic frame 26 (A.30.A)
2	-		

NOTE: For the wiring color code refer to, **ELECTRICAL POWER SYSTEM - Electrical standard (A.30.A)**.



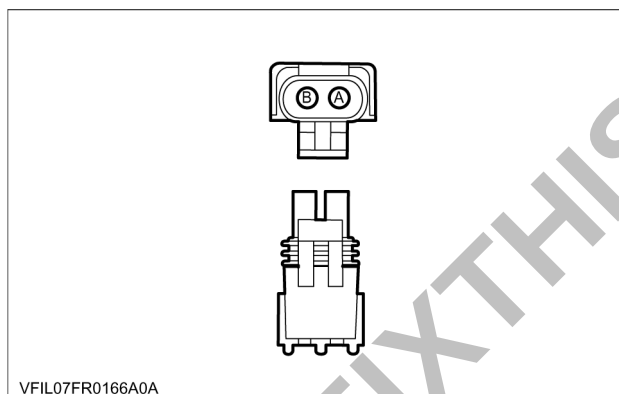
Left hand side of battery case

NOTE: For connector service tools refer to, **Wiring harness - Special tools 3 (A.30.A)**.

Concave adjustment actuator (M10)

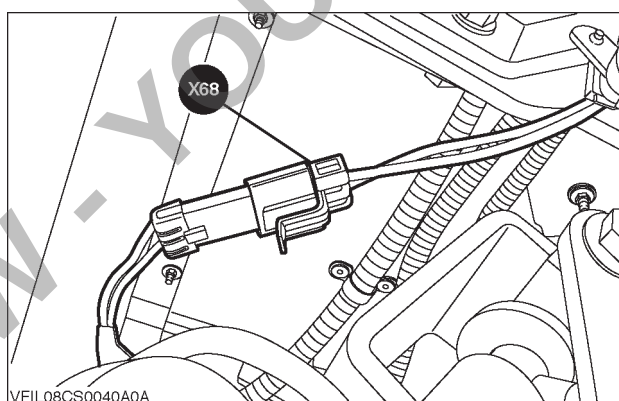
Connector X68 Concave adjustment actuator (M10)			
Position	Wire number	Circuit reference	Electrical schematic frame
A	667 (GR)	Concave adjustment actuator circuit	Wiring harness - Electrical schematic frame 12 (A.30.A)
B	668 (WT)	Concave adjustment actuator circuit	Wiring harness - Electrical schematic frame 12 (A.30.A)

NOTE: For the wiring color code refer to, **ELECTRICAL POWER SYSTEM - Electrical standard (A.30.A)**.



VFIL07FR0166A0A 15

NOTE: For connector service tools refer to, **Wiring harness - Special tools 4 (A.30.A)**.



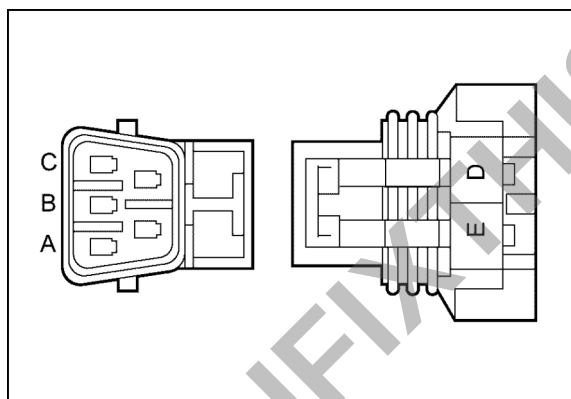
VFIL08CS0040A0A 16

Under cab, left-hand side

Remote lower sieve motor (M18)

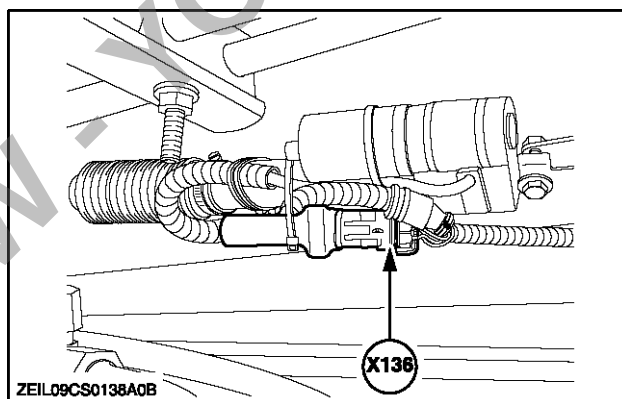
Connector X136			
Remote upper sieve motor (M18)			
Position	Wire number	Circuit reference	Electrical schematic frame
A	793 (BL)	Lower sieve actuator potentiometer ground	Wiring harness - Electrical schematic frame 13 (A.30.A)
B	791 (PK)	Lower sieve actuator potentiometer reference voltage	
C	787 (GE)	Lower sieve actuator potentiometer signal	
D	784 (WT)	Lower sieve actuator signal	
E	785 (GR)	Lower sieve actuator signal	

NOTE: For the wiring color code refer to, **ELECTRICAL POWER SYSTEM - Electrical standard (A.30.A)**.



PAC_12146045_3 15

NOTE: For connector service tools refer to, **Wiring harness - Special tools 4 (A.30.A)**.



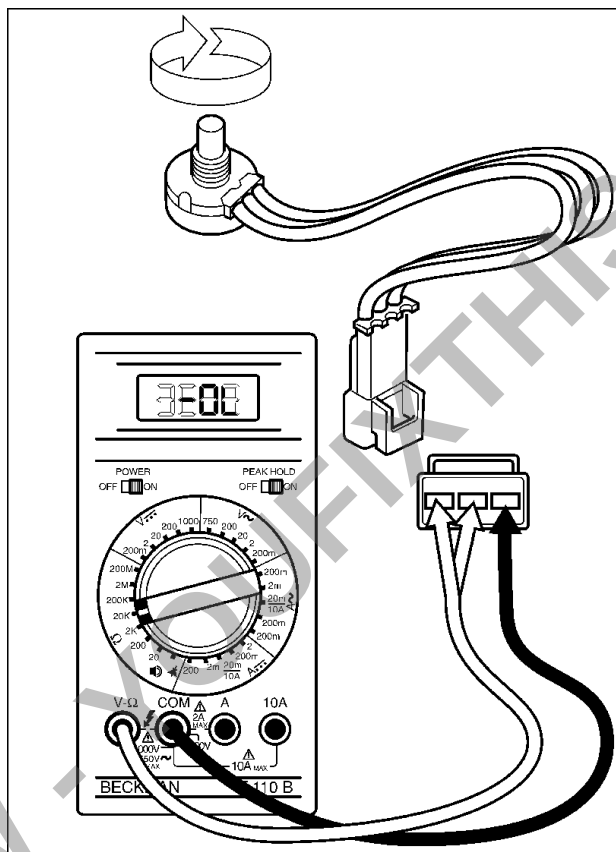
ZEIL09CS0138A0B 16

Above rear axle

1b		FPT engine (New Holland) starter circuit
CSX7050 Hillside 1660 >....		
Code	Description	Line
A4	Engine module	50
A6	CM module - engine speed adjustment	130
A25	A-post - alternator	250
F1	80 A - engine module main fuse	240
F7	10 A - 12 V plug - operator's seat	490
F13	40 A - drum variator	290
F14	40 A - start module / cigarette lighter	460
F26	80 A - battery main fuse	240
F63	30 A - engine module	260
G1	Battery 1	190
G2	Battery 2	210
G3	Alternator	240
H1	LED - alternator	260
K1	Relay - starter circuit	360
K2	12 V after contact relay 1 (fuse print)	380
K2	12 V after contact relay 2 (fuse print)	410
K2	12 V after contact relay 3 (fuse print)	430
M1	Motor - starter	250
S1	Switch - main battery	190
S2	Switch - multi-function handle neutral	350
S3	Switch - Ignition	360
S82	Switch - engine speed	150
X9	Connector - 12 V plug starter module	460
X80	Connector - 12 V plug, operator's seat	500
X87	Connector - cigarette lighter	430
Line:	10 - 510	

3. ELECTRICAL TEST PROCEDURE 3: RESISTANCE TEST FOR ELECTRICAL PARTS CONDITIONS FOR PERFORMING RESISTANCE TEST

1. Disconnect combine part by unplugging electrical connectors to expose the part assembly connector for testing.
2. Set electrical meter to measure resistance or Ohms and insert test probes into connector terminals specified in procedure. When checking potentiometers, measure from wiper terminal to each of the other terminals while TURNING THE POT SHAFT. This will ensure no open spots escape detection. When checking rocker or rotary switches, actuate the switch while measuring for opens and shorts.
3. Compare measured values to values specified in the fault code procedures. Allow plus or minus 5 percent of range tolerance for all measurements.



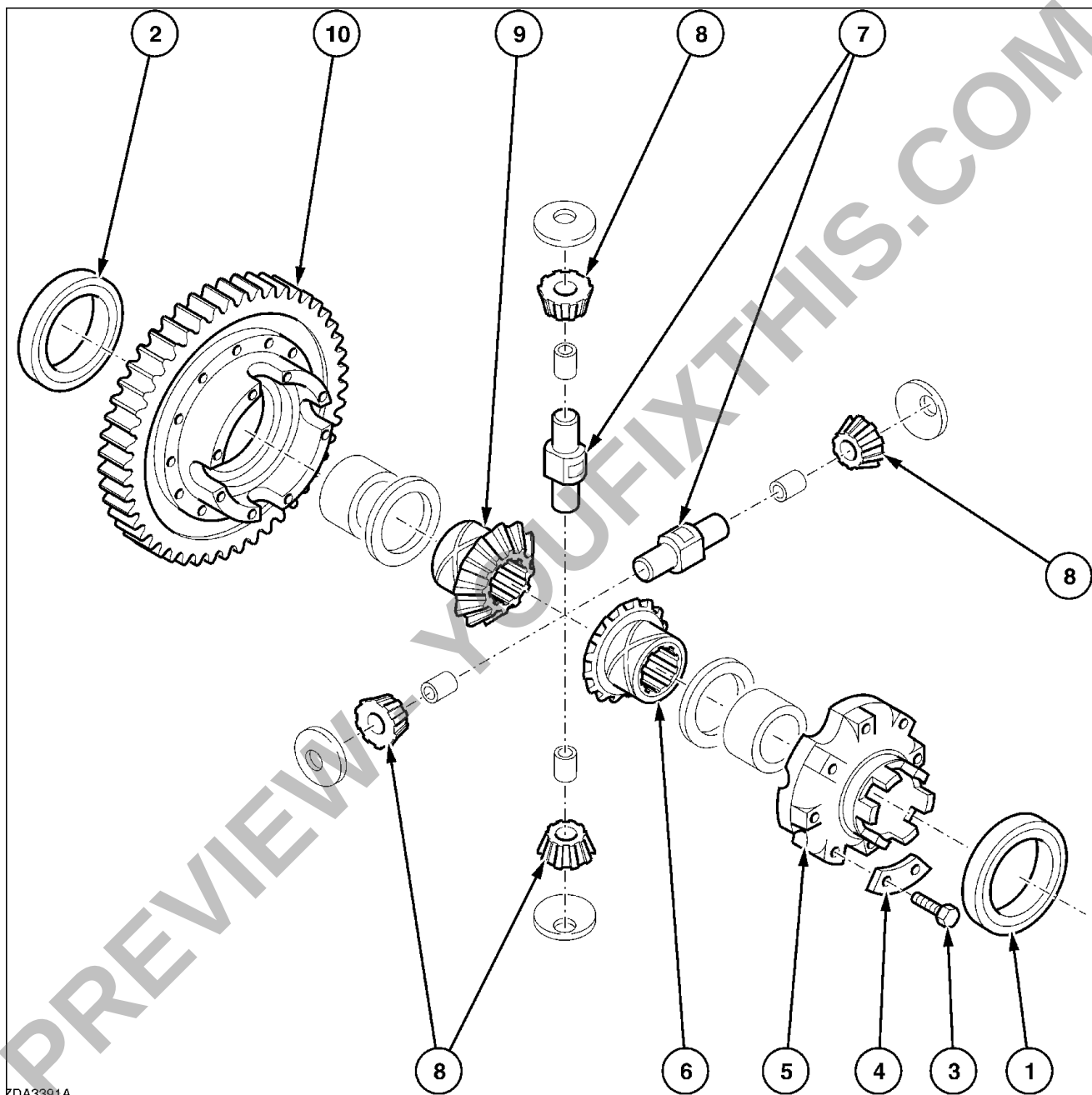
ZDF0224A 3

DISTRIBUTION SYSTEMS - FAULT CODES

Reference	Description	Controller
F025	ELECTRONIC SYSTEM General Data bus Active terminator , No detects , No terminal 15 signals detected	
F028	FUEL AND INJECTION SYSTEM General Sensing system , DIAGNOSTIC DEFECT Tightness Water infiltration or accumulation	
F049	POWER PRODUCTION ENGINE COOLANT SYSTEM General Sensing system Coolant temperature , DIAGNOSTIC SYMPTOM Temperature	
F050	ENGINE COOLANT SYSTEM General Sensing system Coolant temperature , Self-test failed , Coolant temperature sensor-dynamic test	
F051	AIR INTAKE SYSTEM General Sensing system Boost temperature sensor , No address signal , Boost temperature signal	
F052	AIR INTAKE SYSTEM General Sensing system Boost pressure sensor , Out of range , Boost pressure sensor	
F053	FUEL AND INJECTION SYSTEM General Sensing system Temperature sensor , Out of range , Fuel temperature signal	
F054	FUEL AND INJECTION SYSTEM General Sensing system Pressure sensor , Rail pressure sensor	
F056	LUBRICATION SYSTEM General Sensing system Oil pressure , Out of range , Oil pressure sensor	
F058	LUBRICATION SYSTEM General Sensing system Oil temperature , Out of range , Oil temperature sensor	
F065	ENGINE General Sensing system Crankshaft sensor , Malfunction , Crankshaft sensor failure	
F066	ENGINE General Sensing system Camshaft speed sensor , Incorrect work , Running with camshaft sensor only	
F067	POWER PRODUCTION ENGINE General Sensing system Camshaft speed sensor , DIAGNOSTIC ERROR Connection/Electrical Unidentified failure	
F068	ENGINE General Sensing system Position sensor , Incorrect setting , Offset between camshaft and crankshaft	
F103	ENGINE General Connecting rod and piston Piston , Incorrect work , Cylinder 1 - Open load	

Differential - Exploded view

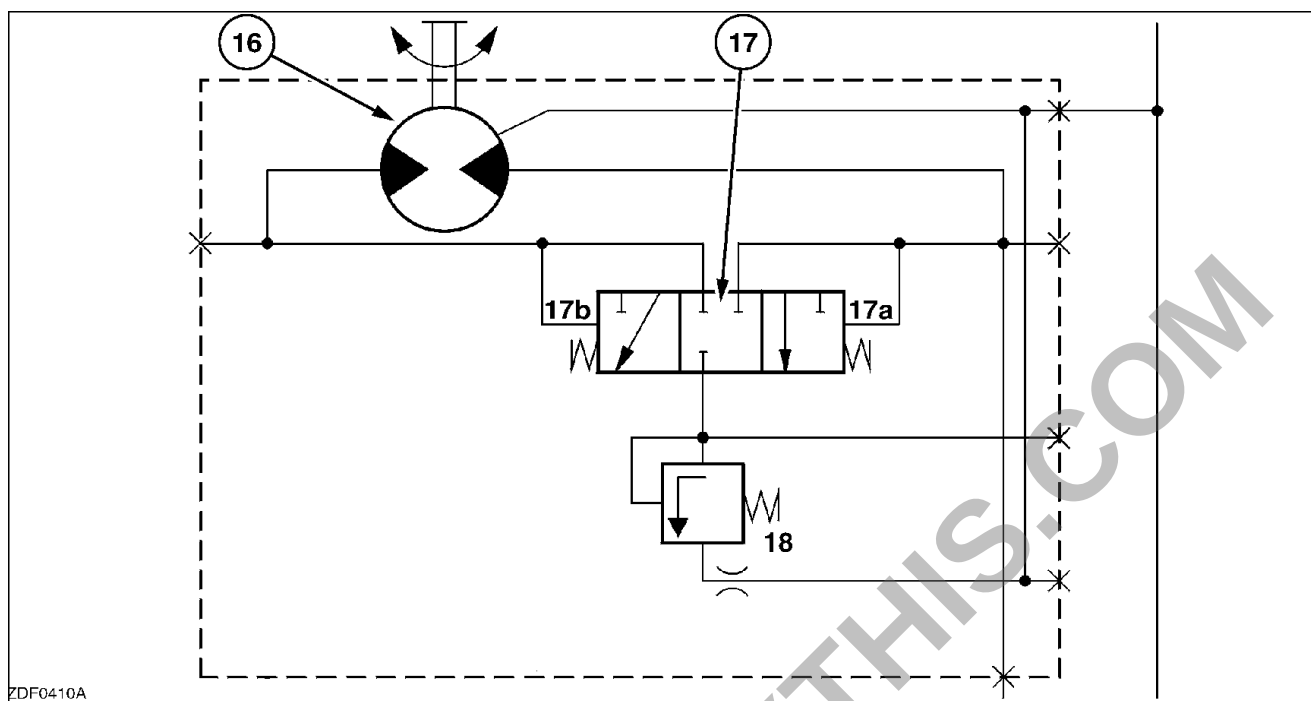
- | | |
|-------------------------|-------------------------------------|
| 1. Bearing | 6. Differential output gear |
| 2. Bearing | 7. Planet gear shaft |
| 3. Bolt | 8. Planet gear |
| 4. Lock plate | 9. Differential output gear |
| 5. Differential housing | 10. Ring gear and housing (riveted) |



ZDA3391A

ZDA3391A 1

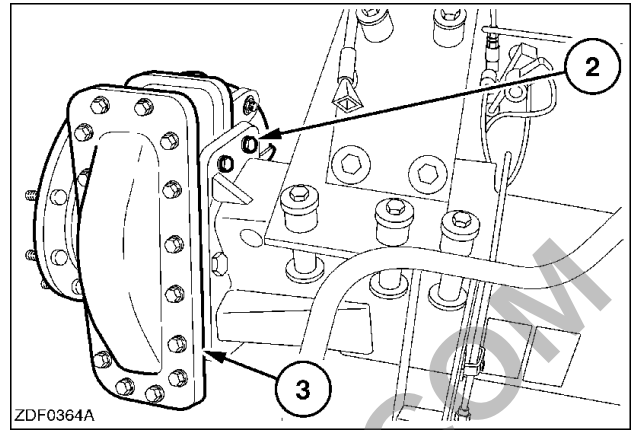
Differential



ZDF0410A 2

5. Loosen the bolts (2) and remove the final drive (3).

NOTE: If the final drive needs to be disassembled, drain the oil before the final drive is removed from the combine (Refer to the Operator's Manual, SECTION 4 - "LUBRICATION AND MAINTENANCE").



ZDF0364A 3

Contents

TRAVELLING - D

SERVICE BRAKE Hydraulic - 30.C

TECHNICAL DATA

SERVICE BRAKE Hydraulic

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Brake

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Disc - General specification	4
Disc - General specification	4

FUNCTIONAL DATA

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SERVICE

SERVICE BRAKE Hydraulic

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CSX7060, CSX7080, CSX7060 Laterale, CSX7080 Laterale, CSX7040, CSX7050, CSX7050 Laterale, CSX7070	

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CSX7050 Hillside	

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Brake

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CSX7060, CSX7080, CSX7060 Laterale, CSX7080 Laterale, CSX7040, CSX7050, CSX7050 Laterale, CSX7070	

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CSX7060, CSX7080, CSX7060 Laterale, CSX7080 Laterale, CSX7040, CSX7050, CSX7050 Laterale, CSX7070	

Remove	19
CSX7050 Hillside	

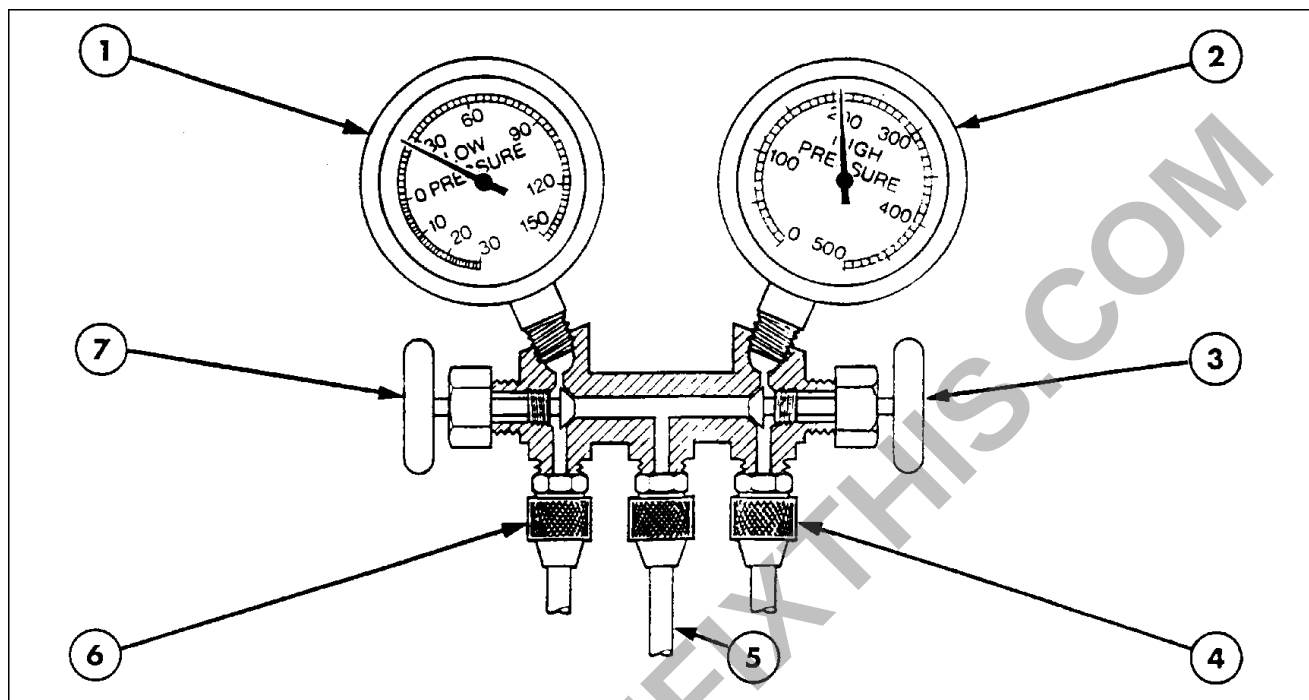
Install	21
CSX7050 Hillside	

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CSX7060, CSX7080, CSX7060 Laterale, CSX7080 Laterale, CSX7040, CSX7050, CSX7050 Laterale, CSX7070	

Lining - Replace	26
CSX7050 Hillside	

9. Performance test the system.

NOTE: DIAGNOSIS: Lack of cooling caused by pressure that is too high on the high side, resulting from improper operation of condenser. (Refrigerant charge may be normal or excessive.)



50_sec50-1_18 6

1 Low side normal

3 High side hand valve closed

5 Not used

7 Low side hand valve closed

2 High side normal

4 High side hose connected to high side service connector

6 Low side hose connected to low side service connector

GAUGE READINGS AND INTERPRETATIONS

EXAMPLE 6

Problem:

Insufficient cooling during hottest part of hot days.

Cause:

Moisture in the system.

CONDITIONS*

1. Low side pressure reading normal but drops to a vacuum reading during testing.
2. High side pressure reading normal but drops when low side reading shows a vacuum.
3. Evaporator air sufficiently cold until low side pressure gauge shows a vacuum, then it becomes warm.

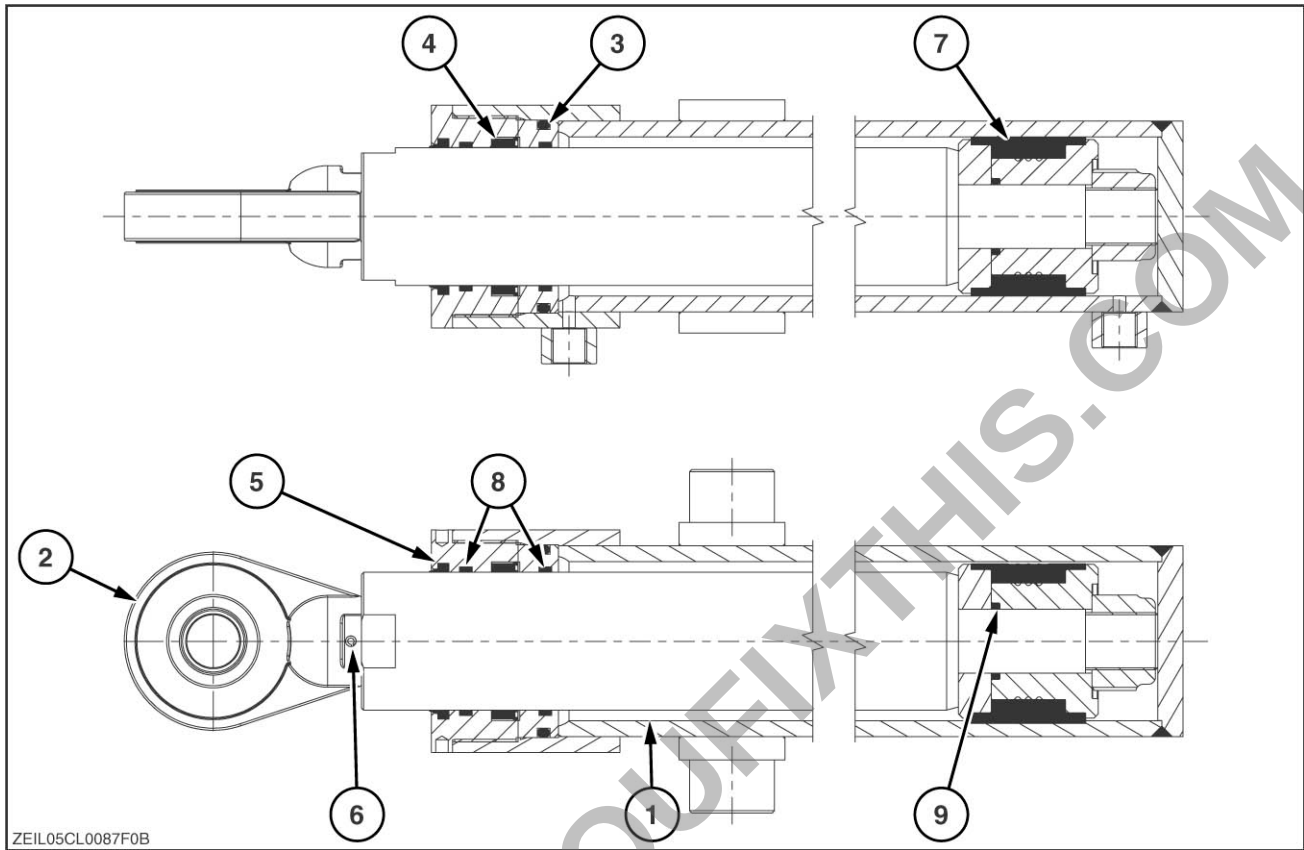
CORRECTIVE PROCEDURES

1. Recover the refrigerant from the system.
2. Replace the filter-drier.
3. Evacuate the system.
4. Charge the system.
5. Performance test the system.

NOTE: DIAGNOSIS: Excessive moisture in system. Drying agent in filter-drier is saturated and releases moisture during high outside air temps. This moisture collects and freezes in the expansion valve, preventing a flow of refrigerant through the evaporator.

Cylinder Longitudinal - Sectional view

CSX7050 Hillside



Longitudinal levelling cylinder

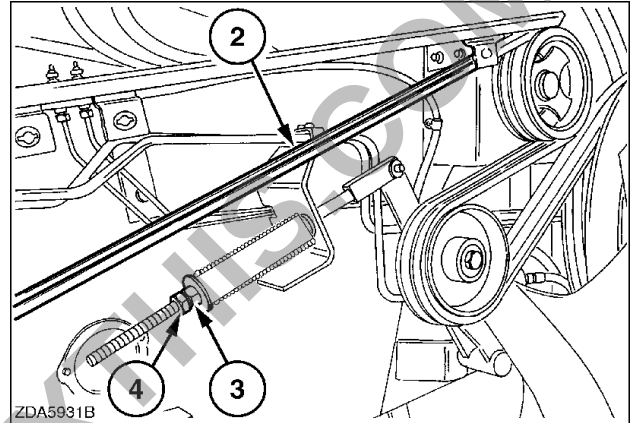
- | | |
|---------------|---------------|
| 1. Cylinder | 6. Dowel pin |
| 2. Ball joint | 7. Guide ring |
| 3. O-ring | 8. Seals |
| 4. Guide ring | 9. O-ring |
| 5. Seal | |

Drive system Slip clutch - Disassemble

1. To remove the slip clutch, detach the straw elevator, refer to the Operator's Manual of your combine; "SECTION 3 - "FIELD AND SITE OPERATION", paragraph headed: "Straw elevator - Removal and Installation".

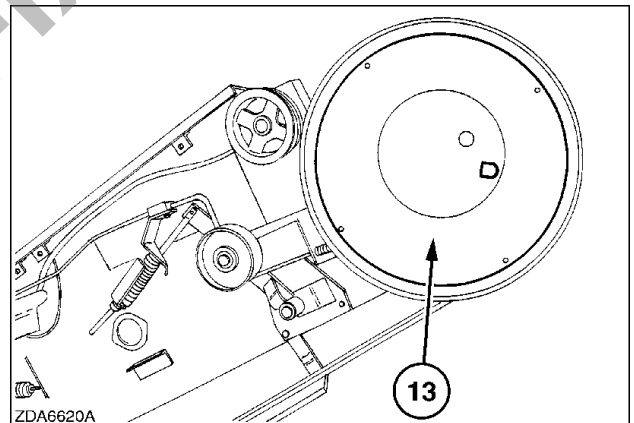
NOTE: It's also possible to first remove the left-hand side traction wheel.

2. Remove the header drive belt (2) by loosening the nuts (4) and (3).



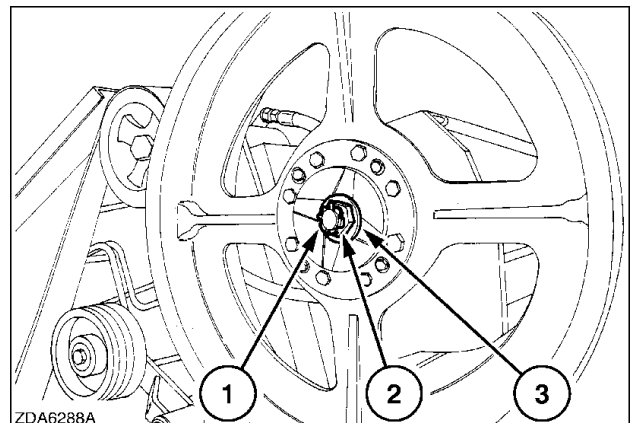
ZDA5931B_118 1

3. Loosen the four bolts to remove the shielding (13) of the pulley.



ZDA6620A 2

4. Remove the cotter pin (1), the nut (2) and the special washer (3).



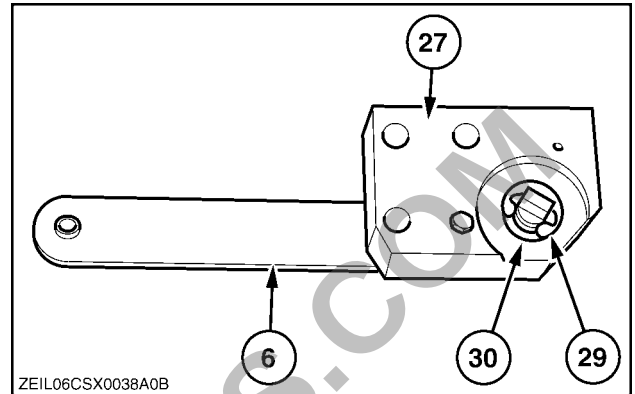
ZDA6288A_119 3

Positioning system - Install

NOTE: Some annotations are not shown in the drawings. For more details and references to annotations, refer to **Positioning system - Exploded view (K.40.B)** and **Positioning system - Sectional view (K.40.B)**.

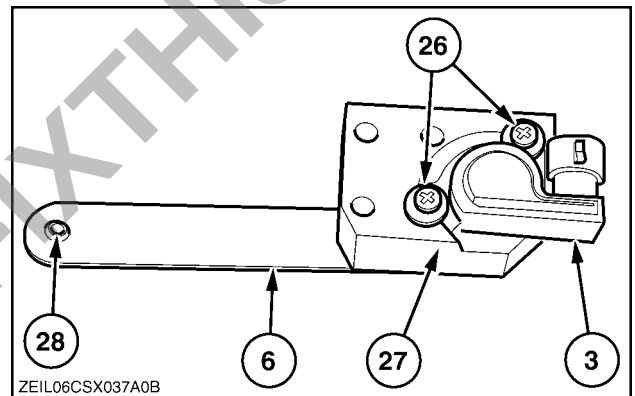
1.
 - Install the bushing (30) on the block (27) if necessary.
 - Install the arm (6) on the block (27) with the retaining ring (29).
 - Apply some grease **NEW HOLLAND AMBRA GR-9 MULTI-PURPOSE GREASE** on the arm (6) to prevent corrosion.

NOTE: Install the parts as shown.



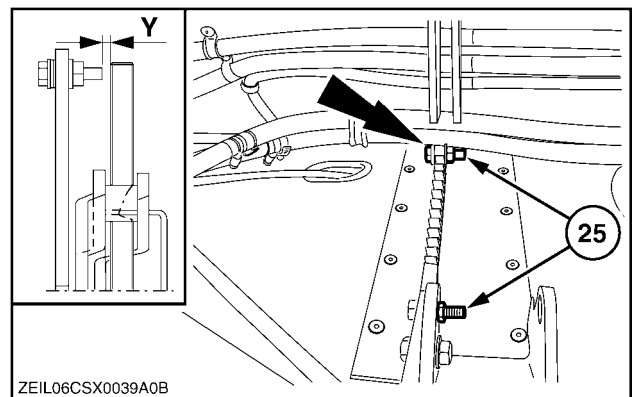
ZEIL06CSX0038A0B 1

2. Install the potentiometer (3) with the washers and the screws (26) on the block (27). If necessary, install the retaining clip (28) onto the arm (6).



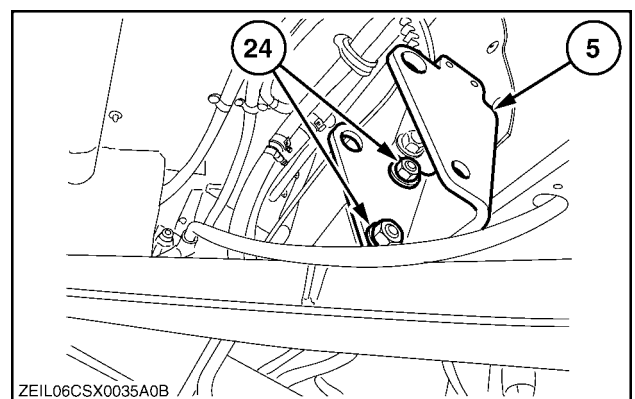
ZEIL06CSX0037A0B 2

3.
 - If removed, install the travel limiter bolts (25) with the washers and the nuts.
 - The distance "Y" should be between **5 - 10 mm (3/16 - 3/8 in)**. Adjust by adding or removing washers at the side indicated with the arrow.



ZEIL06CSX0039A0B 3

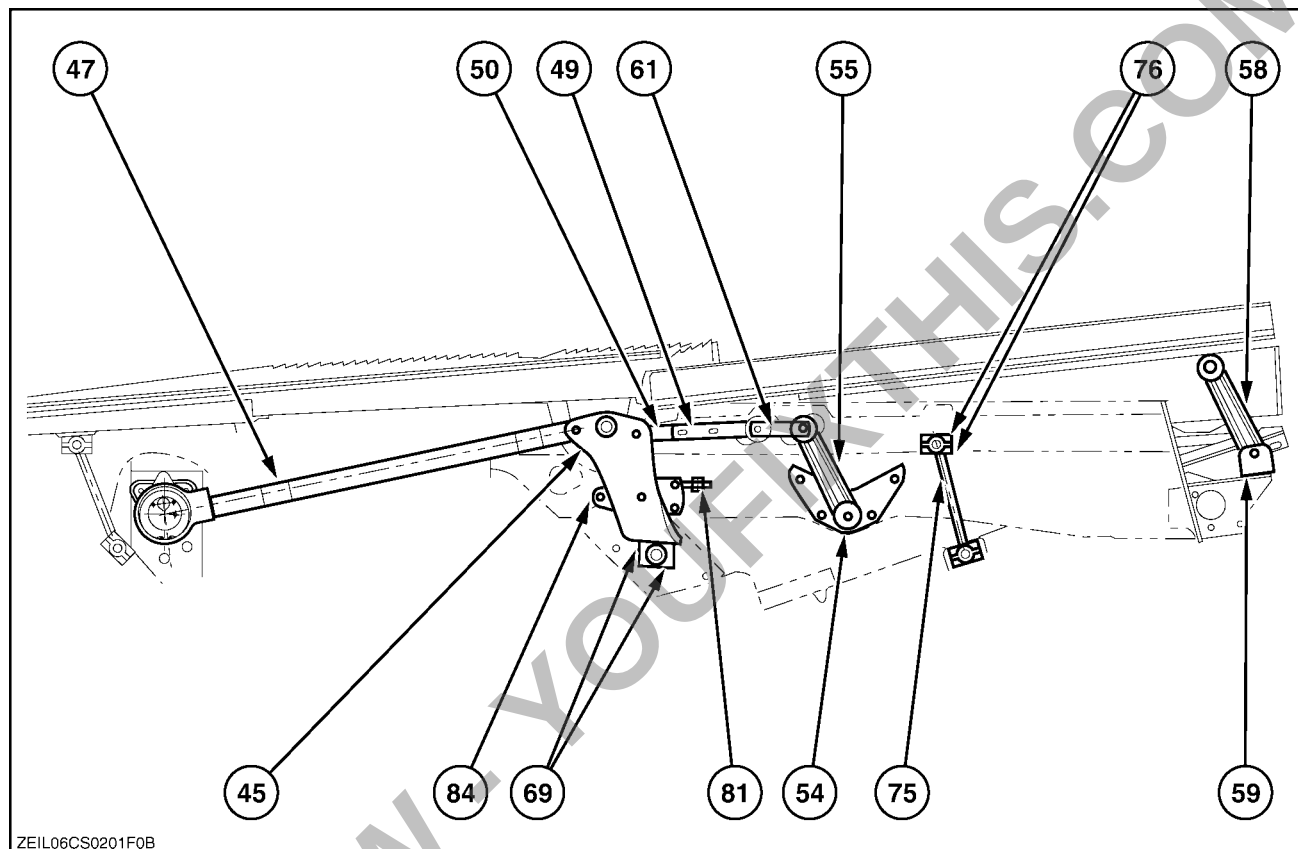
4. Install the support (5) with the bolts, the washers and the nuts (24).



ZEIL06CSX0035A0B 4

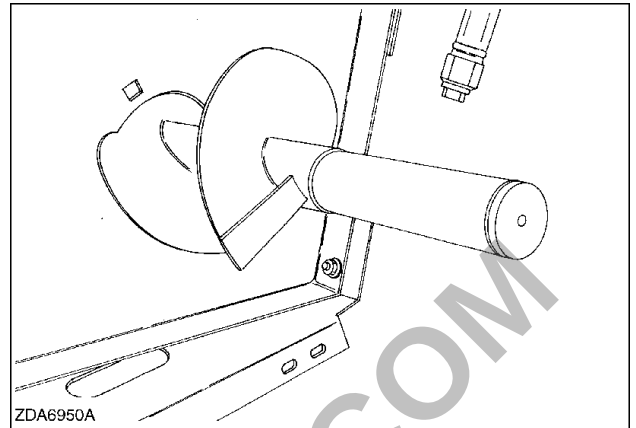
Shoe drive system - Sectional view

- | | |
|--------------------------------|------------------------|
| 45. Pivot arm LH | 59. Bracket |
| 47. Eccentric drive rod LH | 61. Plate |
| 49. Arm RH/LH | 69. Hinge joint halves |
| 50. Arm RH | 75. Arm |
| 54. Plate LH | 76. Joint components |
| 55. Front suspension arm RH/LH | 81. Eye bolt and nuts |
| 58. Rear suspension arm RH/LH | 84. Hinge plate |



ZEIL06CS0201F0B 1

13. Turn out the auger through the long sleeve hole at the left-hand side.
At the right-hand side, remove the sprocket .



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