

SERVICE MANUAL

TC5060 / TC5070 / TC5080
Combine

Part number 47663637

English
March 2014



Link Product / Engine

Product	Market Product	Engine
null FPT NEF TIER III	Europe	F4GE9684
null FPT NEF TIER IVa	Europe	F4HFE613V*A003
null FPT NEF TIER IVa	Europe	F4HFE613U*A006

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INTRODUCTION

Foreword

IMPORTANT INFORMATION

All repair and maintenance works listed in this manual must be carried out only by staff belonging to the NEW HOLLAND Service network, strictly complying with the instructions given and using, whenever required, the special tools.

Anyone who carries out the above operations without complying with the prescriptions shall be responsible for the subsequent damages.

The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional or local dealers, reject any responsibility for damages due to the anomalous behavior of parts and/or components not approved by the manufacturer himself, including those used for the servicing or repair of the product manufactured or marketed by the Manufacturer. In any case, no warranty is given or attributed on the product manufactured or marketed by the Manufacturer in case of damages due to an anomalous behavior of parts and/or components not approved by the Manufacturer.

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Basic instructions - How to use and navigate through this manual

Technical Information

This manual has been produced by a new technical information system. This new system is designed to deliver technical information electronically through Web delivery (eTim), DVD and in paper manuals. A coding system called SAP has been developed to link the technical information to other Product Support functions, e.g., Warranty.

Technical information is written to support the maintenance and service of the functions or systems on a customer's machine. When a customer has a concern on his machine it is usually because a function or system on his machine is not working at all, is not working efficiently, or is not responding correctly to his commands. When you refer to the technical information in this manual to resolve that customer's concern, you will find all the information classified using the SAP coding, according to the functions or systems on that machine. Once you have located the technical information for that function or system then you will find all the mechanical, electrical or hydraulic devices, components, assemblies and sub assemblies for that function or system. You will also find all the types of information that have been written for that function or system, the technical data (specifications), the functional data (how it works), the diagnostic data (fault codes and troubleshooting) and the service data (remove, install adjust, etc.).

By integrating SAP coding into technical information, you will be able to search and retrieve just the right piece of technical information you need to resolve that customer's concern on his machine. This is made possible by attaching 3 categories to each piece of technical information during the authoring process.

The first category is the Location, the second category is the Information Type and the third category is the Product:

- LOCATION - is the component or function on the machine, that the piece of technical information is going to describe e.g. Fuel tank.
- INFORMATION TYPE - is the piece of technical information that has been written for a particular component or function on the machine e.g. Capacity would be a type of Technical Data that would describe the amount of fuel held by the Fuel tank.
- PRODUCT - is the model for which the piece of technical information is written.

Every piece of technical information will have those 3 categories attached to it. You will be able to use any combination of those categories to find the right piece of technical information you need to resolve that customer's concern on his machine.

That information could be:

- the description of how to remove the cylinder head
- a table of specifications for a hydraulic pump
- a fault code
- a troubleshooting table
- a special tool

How to use this manual

This manual is divided into Sections. Each Section is then divided into Chapters. Contents pages are included at the beginning of the manual, then inside every Section and inside every Chapter. An alphabetical Index is included at the end of a Chapter. Page number references are included for every piece of technical information listed in the Chapter Contents or Chapter Index.

Each Chapter is divided into four Information types:

- Technical Data (specifications) for all the mechanical, electrical or hydraulic devices, components and assemblies.
- Functional Data (how it works) for all the mechanical, electrical or hydraulic devices, components and assemblies.
- Diagnostic Data (fault codes, electrical and hydraulic troubleshooting) for all the mechanical, electrical or hydraulic devices, components and assemblies.
- Service Data (remove disassembly, assemble, install) for all the mechanical, electrical or hydraulic devices, components and assemblies.

Sections

Sections are grouped according to the main functions or a systems on the machine. Each Section is identified by a number 00, 35, 55, etc. The amount of Sections included in the manual will depend on the type and function of the machine that the manual is written for. Each Section has a Contents page listed in alphabetic/numeric order. This table illustrates which Sections could be included in a manual for a particular product.

SECTION	PRODUCT				
	Tractors				
	Vehicles with working arms: backhoes, excavators, skid steers,				
	Combines, forage harvesters, balers,				
	Seeding, planting, floating, spraying equipment,				
	Mounted equipment and tools,				
00 - Maintenance					
05 - Machine completion and equipment					
10 - Engine					
14 - Main gearbox and drive					
18 - Clutch					
21 - Transmission					
23 - Four wheel drive system					
25 - Front axle system					
27 - Rear axle system					
29 - Hydrostatic drive					
31 - Implement power take-off					
33 - Brakes and controls					
35 - Hydraulic systems					
36 - Pneumatic system					
37 - Hitches, drawbars and implement couplings					
39 - Frames and ballasting					
41 - Steering					
44 - Wheels					
46 - Steering clutches					
48 - Tracks and track suspension					
50 - Cab climate control					
55 - Electrical systems					
56 - Grape harvester shaking					
58 - Attachments/headers					
60 - Product feeding					
61 - Metering system					
62 - Pressing - Bale formation					

INTRODUCTION

63 - Chemical applicators						
64 - Chopping						
66 - Threshing						
68 - Tying/Wrapping/Twisting						
69 - Bale wagons						
70 - Ejection						
71 - Lubrication system						
72 - Separation						
73 - Residue handling						
74 - Cleaning						
75 - Soil preparation/Finishing						
76 - Secondary cleaning / Destemmer						
77 - Seeding						
78 - Spraying						
79 - Planting						
80 - Crop storage / Unloading						
82 - Front loader and bucket						
83 - Telescopic single arm						
84 - Booms, dippers and buckets						
86 - Dozer blade and arm						
88 - Accessories						
89 - Tools						
90 - Platform, cab, bodywork and decals						



SERVICE MANUAL

Engine

TC5000 Series Upgrade

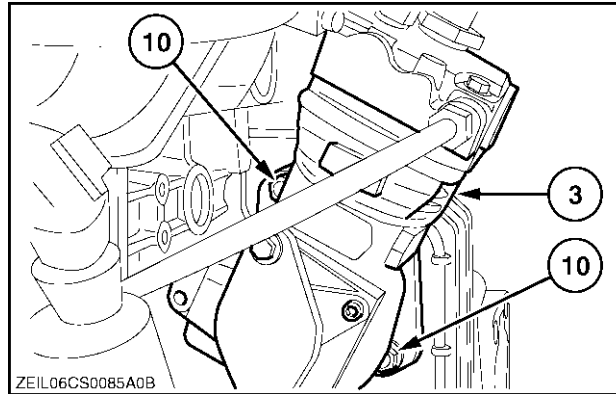
Air compressor - Static description

TC5070	WE
TC5080	WE

The air compressor (**3**) is a single cylinder, gear driven air compressor, which supplies air to a reservoir tank, enabling the operator to have a source of compressed air for cleaning purposes and tyre inflation. The compressor is mounted directly on the engine with the two nuts (**10**).

Engine oil is supplied through an internal connection with the engine, using engine oil pressure to lubricate the compressor.

The compressed air is delivered through tubing to a combination pressure relief control valve, and from there to the reservoir tank located on the straw hood of the combine. A quick disconnect fitting allows easy connection to the air supply for blow off nozzles as well as for tyre inflation equipment.

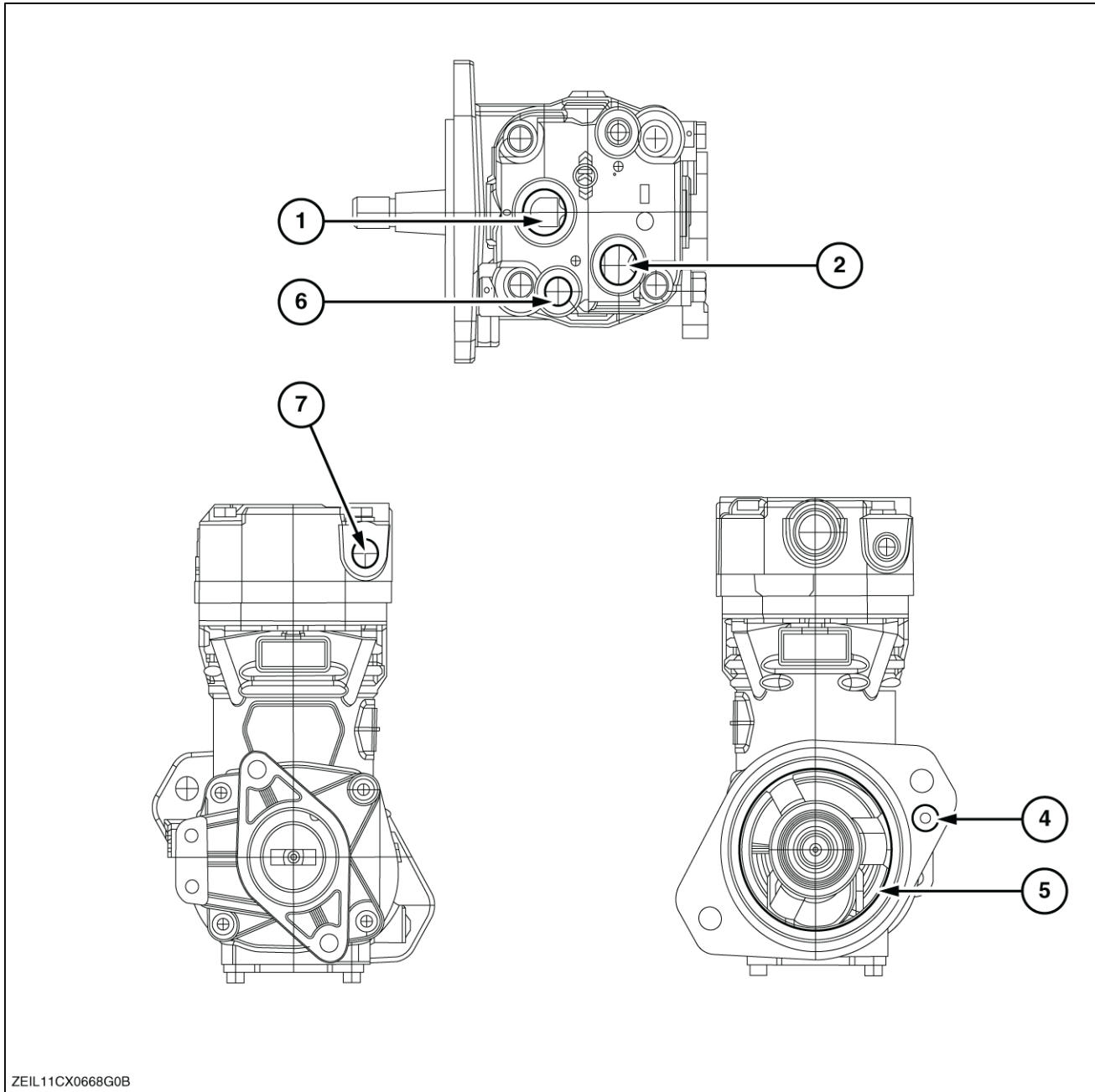


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Air compressor - Drawing

TC5070
TC5080

WE
WE

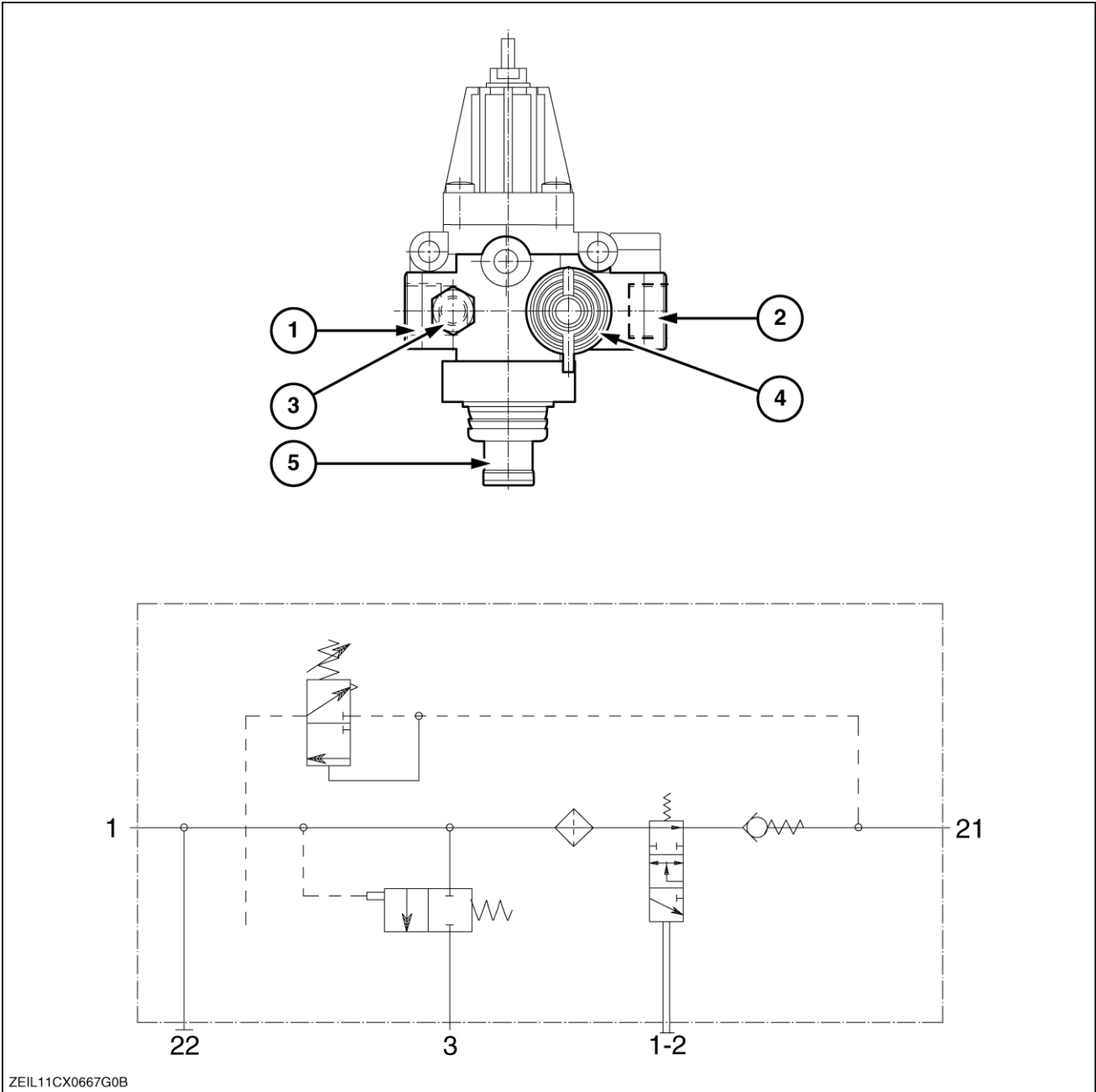


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Reference	Port	Port Name	Port Function
1	0	Inlet Port	Supplies Compressor with clean intake air
2	2	Discharge Port	Expels pressurized air for system
4	8.1	Oil Supply	Supplies compressor with lube oil from engine
5	8.2	Oil Drain	Allows lube oil to return to engine
6	9.1	Coolant	Receive coolant from engine
7	9.2	Coolant	Return coolant to engine

Compressed air tank Relief valve - Drawing

TC5070	WE
TC5080	WE



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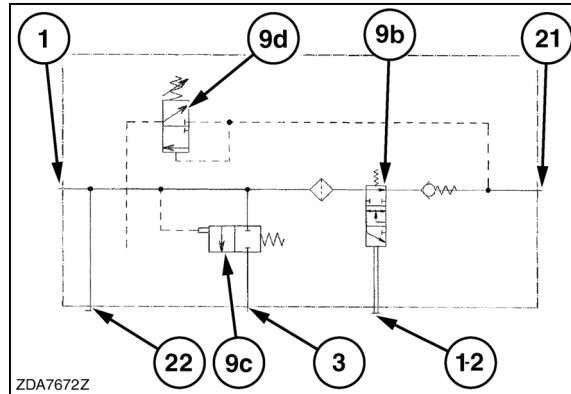
Reference	Port	Port name	Port function
1	1	Inlet	Pressurized air "in" from compressor
2	21	Outlet	Pressurized air "out" to reservoir tank and blow off line quick connect port
3	22	Auxiliary supply	Auxiliary port not used in this application
4	1-2	Tire inflation device	Port used to connect tire inflation device
5	3	Exhaust for compressor idling	Discharge exhaust for excess pressure in system

Compressed air tank Relief valve - Static description

TC5070	WE
TC5080	WE

The pressure relief valve is developed to protect the system against pressures higher than **8 bar (116 psi)**. Port **(1)** is connected to the air compressor, port **(21)** is connected to the pressurized reservoir. When the pressure on port **(21)** reaches **8 bar (116 psi)**, the control valve **(9d)** will be activated which means that also control valve **(9c)** will be activated. The pressure from the compressor will now pass through port **(3)**. If the pressure drops below **8 bar (116 psi)** by activation a engaging valve, control valve **(9d)** will close. Valve **(9c)** will not close immediately but will remain in the open position until the pressure exerted on the control of valve **(9c)** will be reduced by **0.6 bar (8.7 psi)**. Then the air will pass through valve **(9b)**.

Schematic diagram

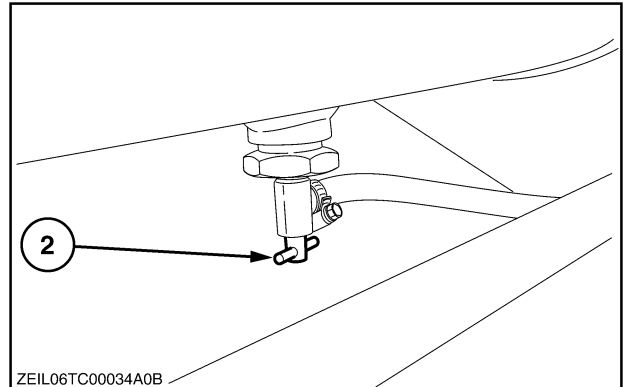


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Air compressor - Remove

TC5070	WE
TC5080	WE

1. Bleed the air from the system by opening the drain (2) at the bottom of the air reservoir.



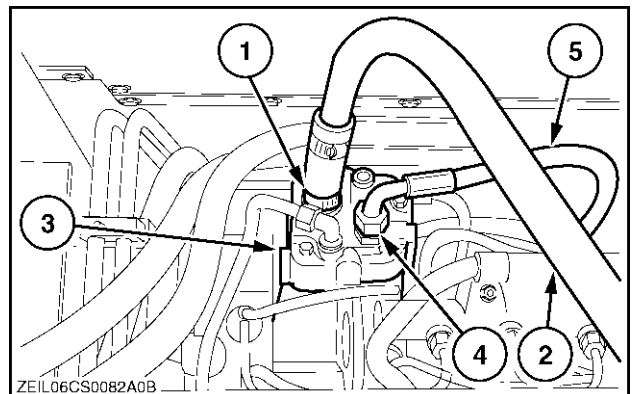
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2. Loosen the retaining strap (1) and remove the air inlet pipe (2) from the air compressor (3).

NOTE: Protect the air inlet and outlet ports from dirt ingress.

3. Loosen the connection (4) to remove the hose (5) from the air compressor (3).



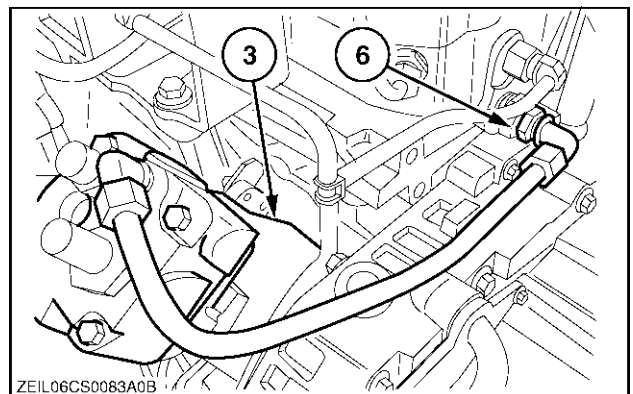
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4. Drain sufficient coolant from the engine cooling system to allow removal of the coolant lines.

NOTE: Refer to the Operator's Manual of your machine.

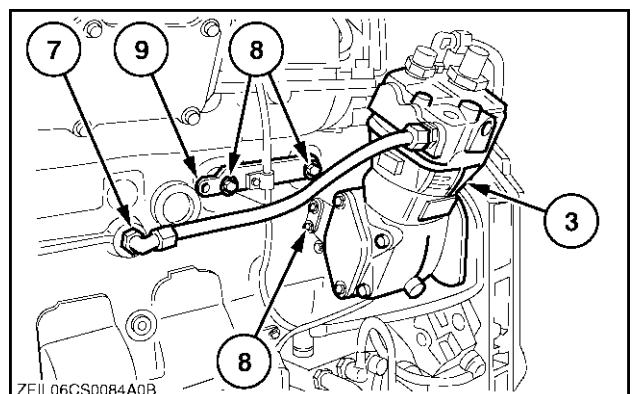
5. Loosen the connection (6).



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6. Loosen the connection (7).
7. Remove the four bolts (8) to remove the support (9).



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Suggest:

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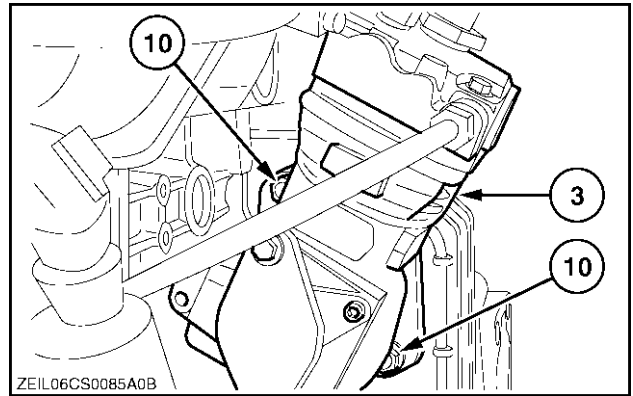
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8. Remove the two nuts **(10)** to remove the air compressor **(3)** from the engine.



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