PROFI 4110 ET
PROFI 4120 ET
PROFI 4130 ET
PROFI 6125 ET
PROFI 6140 ET
PROFI 4110 Classic ET
PROFI 6125 Classic ET
PROFI 6140 Classic ET
PROFI CVT 4110
PROFI CVT 4120
PROFI CVT 4130
Tractor

SERVICE MANUAL

Part number 47665873
English
February 2014
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STEYR

SERVICE MANUAL

PROFI 4110 Classic ET , PROFI 4110 ET , PROFI 4120 ET , PROFI 4130 ET , PROFI 6125 Classic ET , PROFI 6125 ET , PROFI 6140 Classic ET , PROFI 6140 ET , PROFI CVT 4110 , PROFI CVT 4120 , PROFI CVT 4130

Link Product / Engine

Product	Market Product	Engine
PROFI CVT 4110	Europe	F4DFE413C*A
PROFI CVT 4120	Europe	F4DFE413B*A
PROFI CVT 4130	Europe	F4DFE413A*A
PROFI 4110 Classic ET	Europe	F4DFE413E*A
PROFI 4110 ET	Europe	F4DFE413C*A
PROFI 4120 ET	Europe	F4DFE413B*A
PROFI 4130 ET	Europe	F4DFE413A*A
PROFI 6125 Classic ET	Europe	F4DFE613E*A
PROFI 6125 ET	Europe	F4DFE613E*A
PROFI 6140 Classic ET	Europe	F4DFE6132*A
PROFI 6140 ET	Europe	F4DFE6132*A

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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 STEYR 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.

No reproduction, though partial of text and illustrations allowed.

Foreword - How to use and navigate through this manual

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 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 their machine it is usually because a function or system on their machine is not working at all, is not working efficiently, or is not responding correctly to their 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, you will then 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 - the component or function on the machine, that the piece of technical information is going to describe (e.g., Fuel tank).
- INFORMATION TYPE - 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 describing the amount of fuel held by the fuel tank).
- PRODUCT - the model for which the piece of technical information is written.

Every piece of technical information will have those three 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 their machine.

That information could be:

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

Manual content

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

	PRODUCT				
	Tractors				
		Vehicles with working arms: backhoes, excavators, skid steers, ….			
			Combines, forage harvesters, balers, ….		
				Seeding, planting, floating, spraying equipment, ….	
SECTION					Mounted equipment and tools, ….
00 - Maintenance	X	X	X	X	X
05 - Machine completion and equipment	X	X	X	X	X
10 - Engine	X	X	X	X	
14 - Main gearbox and drive	X	X	X	X	
18 - Clutch	X	X	X		
21 - Transmission	X	X	X	X	
23 - Four wheel drive (4WD) system	X	X	X	X	
25 - Front axle system	X	X	X	X	
27 - Rear axle system	X	X	X	X	
29 - Hydrostatic drive	X	X	X	X	
31 - Power Take-Off (PTO)	X		X		
33 - Brakes and controls	X	X	X	X	
35 - Hydraulic systems	X	X	X	X	
36 - Pneumatic system	X	X	X	X	
37 - Hitches, drawbars and implement couplings	X		X	X	
39 - Frames and ballasting	X	X	X	X	X
41 - Steering	X	X	X	X	
44 - Wheels	X	X	X	X	
46 - Steering clutches					
48 - Tracks and track suspension	X	X	X		
50 - Cab climate control	X	X	X	X	
55 - Electrical systems	X	X	X	X	X
56 - Grape harvester shaking					
58 - Attachments/headers			X		
60 - Product feeding			X		

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

Chapters

Each Chapter is identified by a number e.g. Engine - Engine and crankcase - 10.001. The first number is identical to the Section number i.e. Chapter 10.001 is inside Section 10, Engine. The second number is representative of the Chapter contained within the Section.

CONTENTS

The Chapter Contents lists all the technical data (specifications), functional data (how it works), diagnostic data (fault codes and troubleshooting), and service data (remove, install, adjust, etc.), that have been written in that Chapter for that function or system on the machine.

Contents

ENGINE

ENGINE - Engine and crankcase – 10.001

TECHNICAL DATA

ENGINE - Engine and crankcase - General specification (10.001 - D.40.A.10) 4

FUNCTIONAL DATA

ENGINE - Engine and crankcase - Dynamic description (10.001 - C.30.A.10) 6

SERVICE

ENGINE - Engine and crankcase - Remove (10.001 -F.10.A.10) 8

DIAGNOSTIC

ENGINE - Engine and crankcase - Troubleshooting (10.001 - G.40.A.10) 10

INDEX

The Chapter Index lists in alphabetical order all the types of information (called information units) that have been written in that Chapter for that function or system on the machine.

Index

ENGINE - 10

ENGINE

ENGINE - Engine and crankcase - Dynamic description (10.001 - C.30.A.10) 6

ENGINE - Engine and crankcase - General specification (10.001 - D.40.A.10) 4

ENGINE - Engine and crankcase - Remove (10.001 -F.10.A.10) 8

ENGINE - Engine and crankcase - Troubleshooting (10.001 - G.40.A.10) 10

Safety rules

PRECAUTIONARY STATEMENTS
Personal Safety

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

Throughout this manual , you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

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

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

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

NOTICE: *Install new decals if the old decals are destroyed, lost painted over or cannot be read. When parts are replaced that have decals make sure you install a new decal with each new part.*

MACHINE SAFETY

NOTICE: *Notice indicates a situation which, if not avoided, could result in machine or property damage.*

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

INFORMATION

NOTE: *Note indicates additional information which clarifies steps, procedures, or other information in this manual.*

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

SERVICE MANUAL

Engine

PROFI 4110 Classic ET , PROFI 4110 ET , PROFI 4120 ET , PROFI 4130 ET , PROFI 6125 Classic ET , PROFI 6125 ET , PROFI 6140 Classic ET , PROFI 6140 ET , PROFI CVT 4110 , PROFI CVT 4120 , PROFI CVT 4130

Engine - Disconnect

PROFI 6125 Classic ET	WE
PROFI 6125 ET	WE
PROFI 6140 Classic ET	WE
PROFI 6140 ET	WE

Prior operation:
Discharge the Air conditioning system, for further information refer to **Air conditioning - Discharging (50.200)**
Prior operation:
Disconnect battery, for further information refer to **Battery - Disconnect (55.302)**
Prior operation:
Drain the engine coolant system, for further information refer to **Engine cooling system - Drain fluid (10.400)**
Prior operation:
Remove the selective catalytic reduction (SRC) muffler, for further information refer to **Selective Catalytic Reduction (SCR) muffler and catalyst - Remove (10.500)**
Prior operation:
Remove the selective catalytic reduction (SRC) coolant control valve, for further information refer to **Coolant control valve - Remove (10.500)**

⚠ WARNING

Heavy objects!
Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders.
Failure to comply could result in death or serious injury.

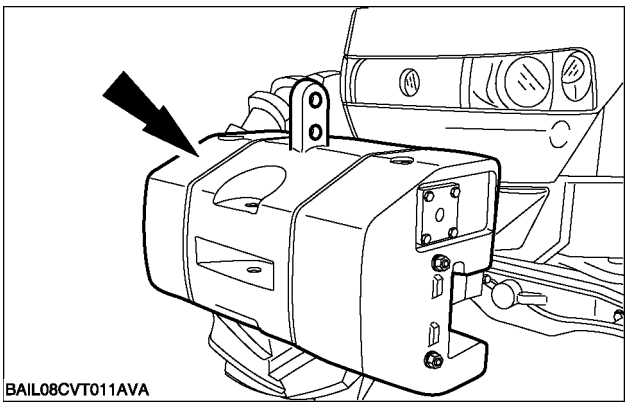
W0398A

⚠ WARNING

Avoid injury!
Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.
Failure to comply could result in death or serious injury.

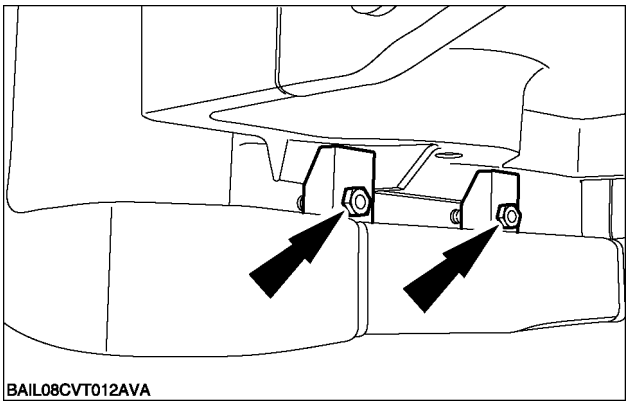
W0208A

1. Using suitable lifting equipment support the front weights.



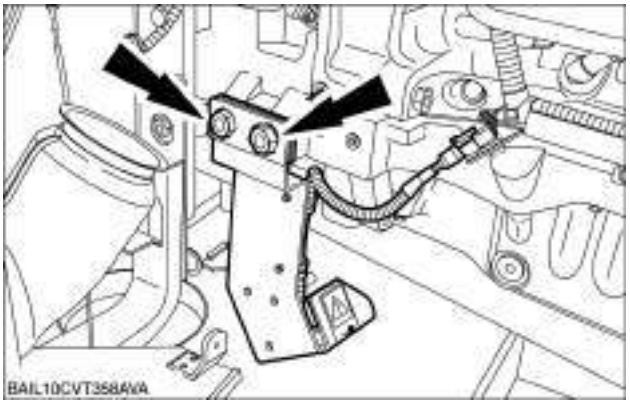
BAIL08CVT011AVA 1

2. Disconnect and remove the front weights from the weight carrier.



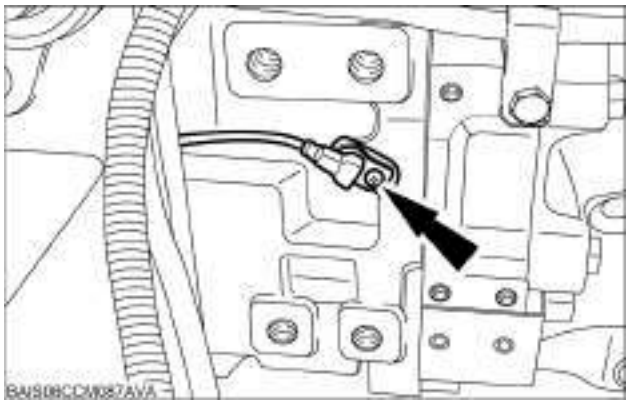
BAIL08CVT012AVA 2

3. Disconnect the radar electrical connector and remove the radar (if fitted).



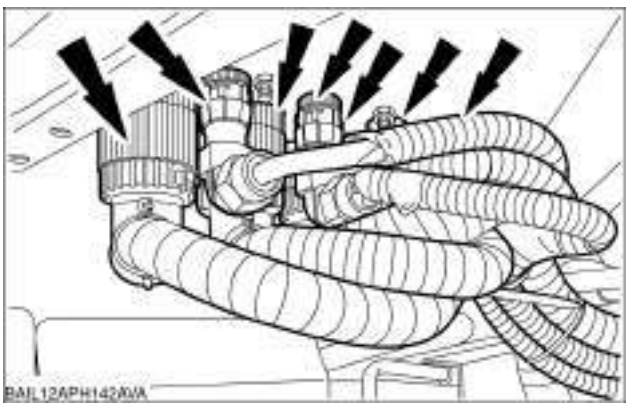
BAIL10CVT358AVA 3

4. Remove the flywheel speed sensor.



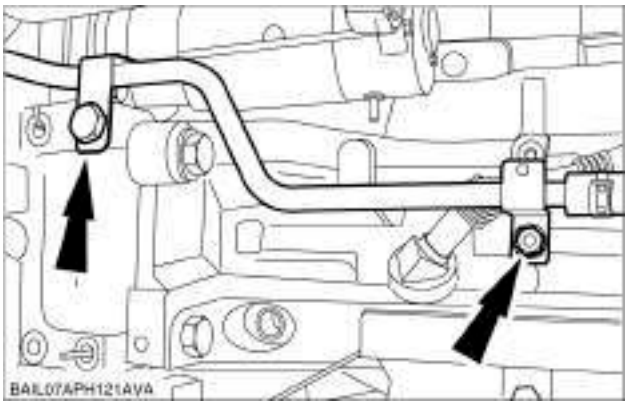
BAIS06CCM087AVA 4

5. Disconnect the engine harness electrical connectors.



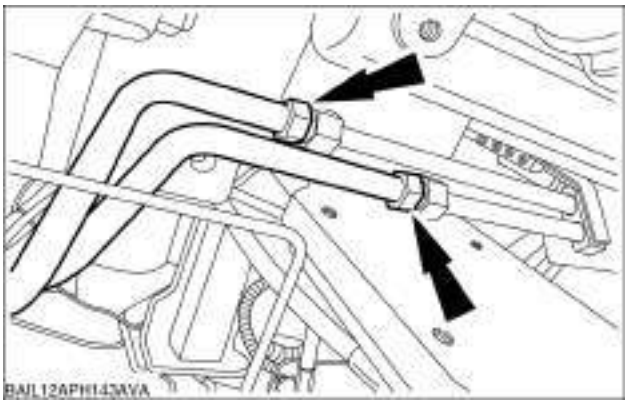
BAIL12APH142AVA 5

6. Detach the cab heater return pipe.



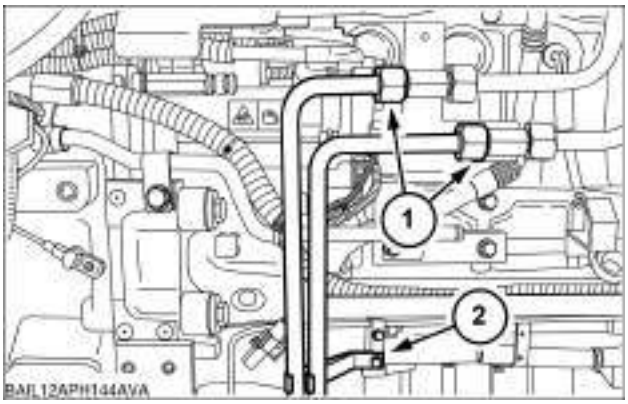
BAIL07APH121AVA 6

7. Disconnect the oil cooler supply pipes.



BAIL12APH143AVA 7

8. Disconnect the oil cooler supply and return pipes **(1)**. Remove the oil cooler pipes **(2)**.

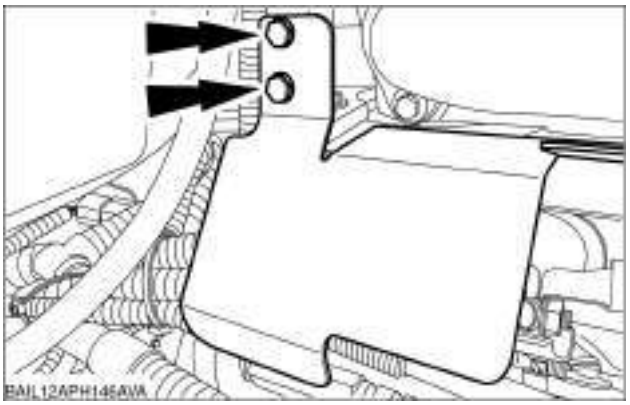


BAIL12APH144AVA 8

9. Disconnect the heater supply hose from the rear of the engine cylinder head.

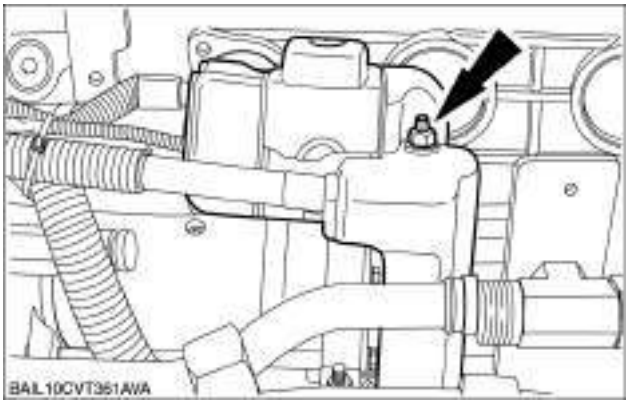
BAIL12APH145AVA 9

10. Remove the starter motor heat shield.



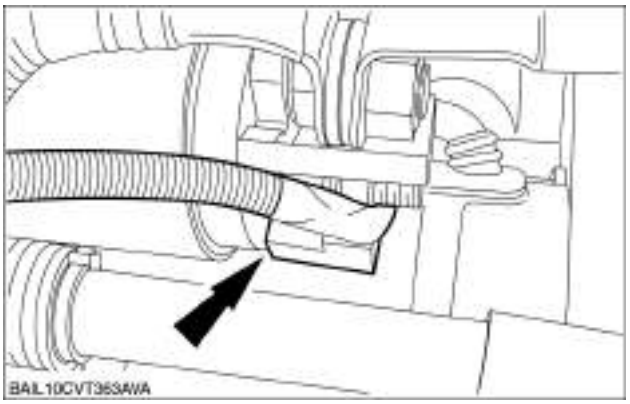
BAIL12APH146AVA 10

11. Remove the starter motor cover.



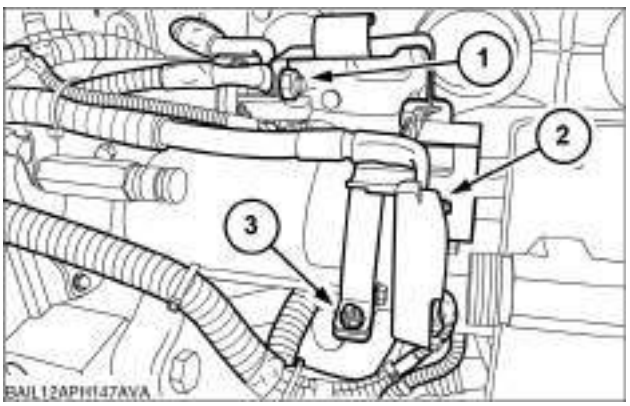
BAIL10CVT361AVA 11

12. Disconnect the starter motor electrical connector.



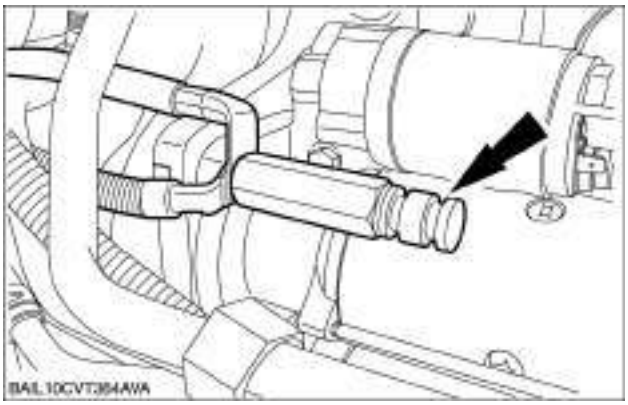
BAIL10CVT363AVA 12

13. Disconnect the positive terminal **(1)**, negative terminal **(2)** relay and bracket **(3)** and position to one side.



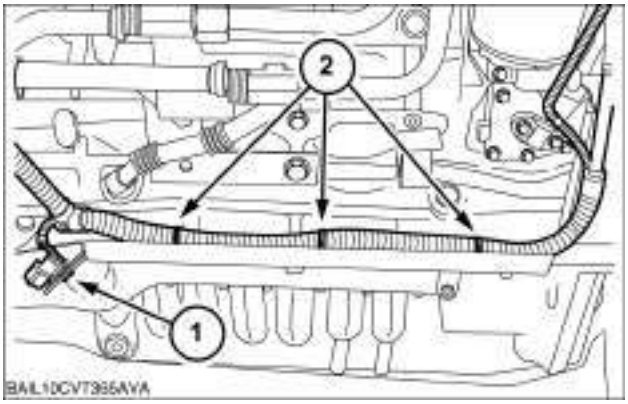
BAIL12APH147AVA 13

14. Disconnect the starter motor negative cables.



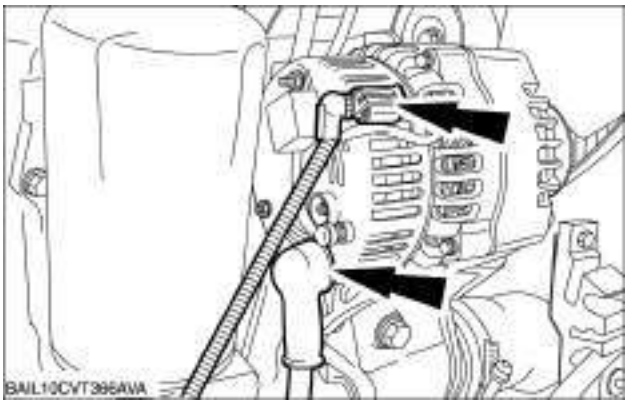
BAIL10CVT364AVA 14

15. Detach the alternator wiring harness electrical connector from the bracket **(1)** and detach the wiring harness **(2)**.



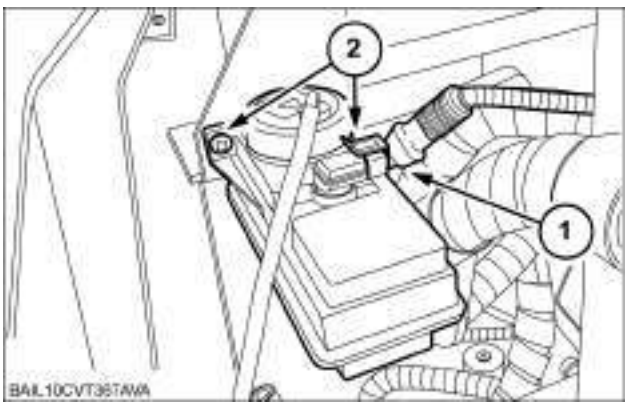
BAIL10CVT365AVA 15

16. Disconnect the alternator electrical connectors.



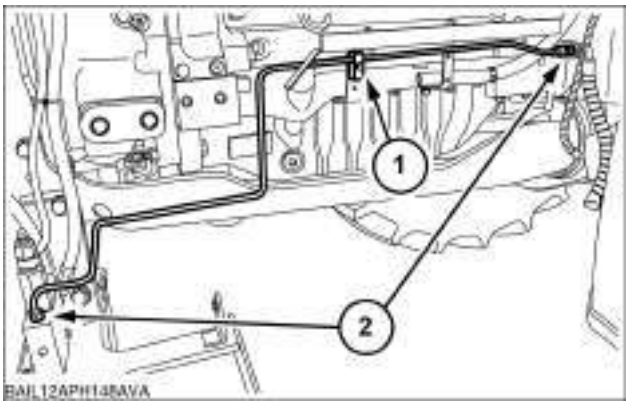
BAIL10CVT366AVA 16

17. Disconnect the brake fluid reservoir electrical connector **(1)** and detach the brake fluid reservoir **(2)** and position it to one side.



BAIL10CVT367AVA 17

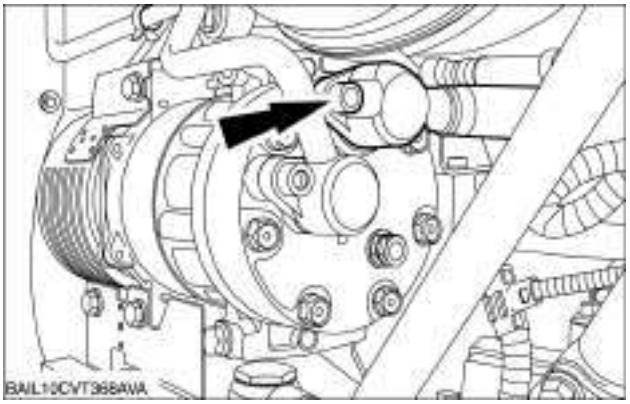
18. Remove the front brake retaining bracket **(1)** and remove the front brake pipe **(2)**.



BAIL12APH148AVA 18

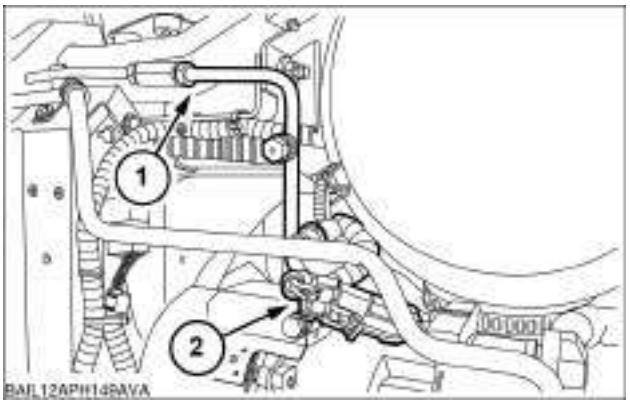
19. Disconnect the A/C pipe from the A/C compressor.

NOTE: *Install blanking plugs/caps to all openings to prevent dirt ingress.*



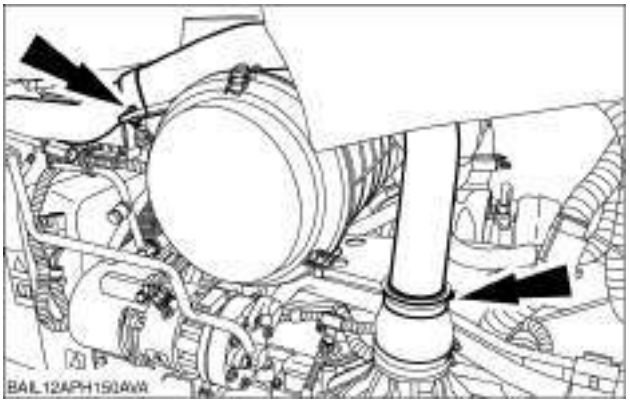
BAIL10CVT368AVA 19

20. Disconnect the high pressure A/C pipe **(1)**.
Disconnect the low pressure switch electrical connector **(2)**.



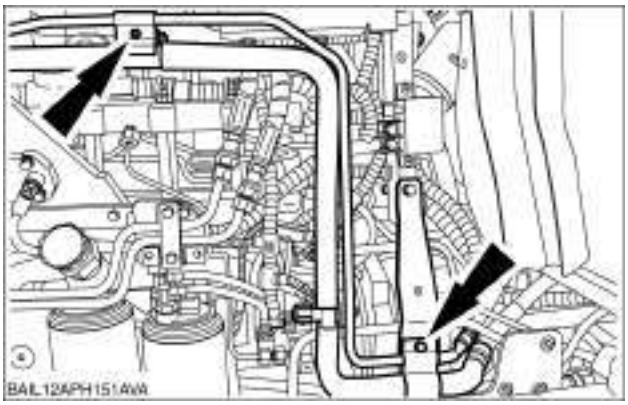
BAIL12APH149AVA 20

21. Disconnect the charge air cooler intake pipe.



BAIL12APH150AVA 21

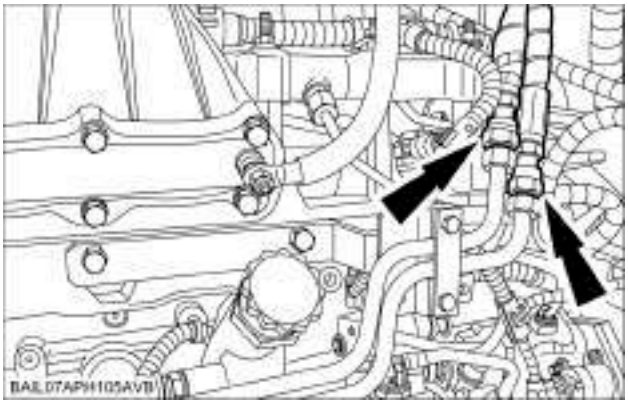
22. Detach the A/C pipes and position it to one side.



BAIL12APH151AVA 22

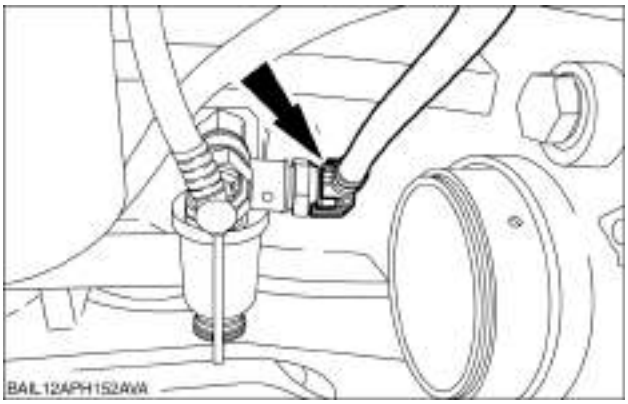
23. Disconnect the steering hoses.

NOTE: *Mark the hoses to aid installation.*



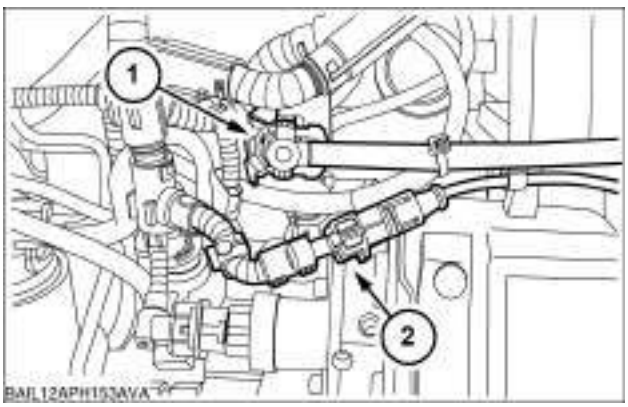
BAIL07APH105AVB 23

24. Disconnect the fuel supply line from the pre-filter/water trap.



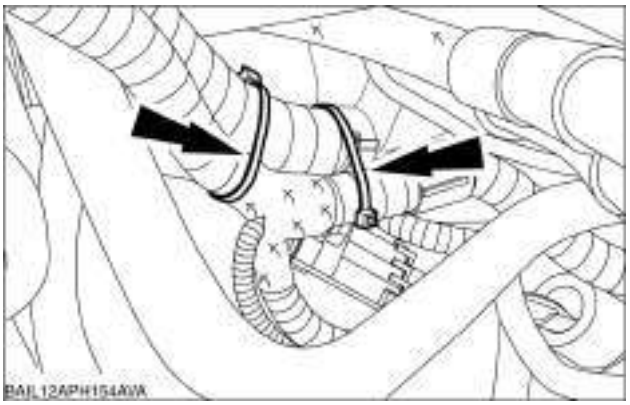
BAIL12APH152AVA 24

25. Disconnect the fuel return line **(1)**.
Disconnect the flywheel electrical connector **(2)**.



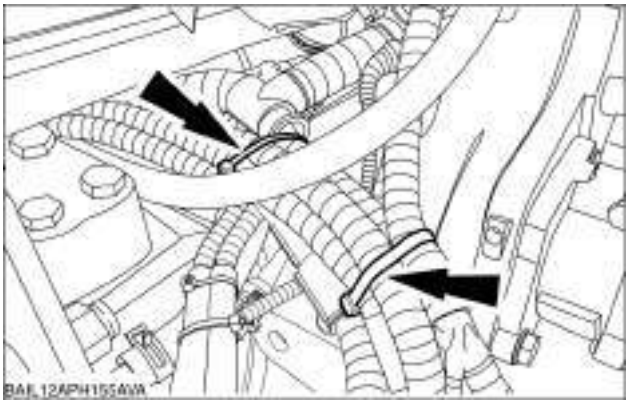
BAIL12APH153AVA 25

26. Cut the cable ties.



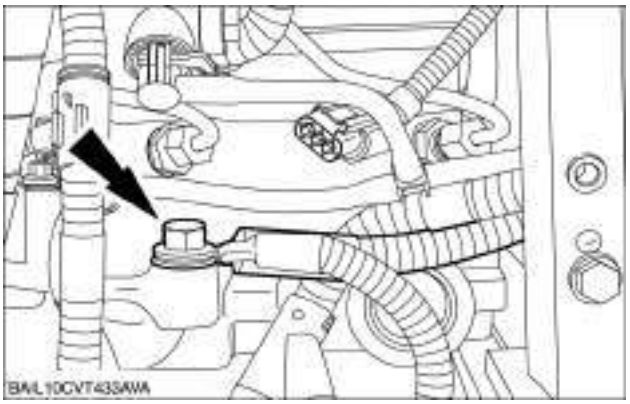
BAIL12APH154AVA 26

27. Cut the starter motor wiring harness cable ties.



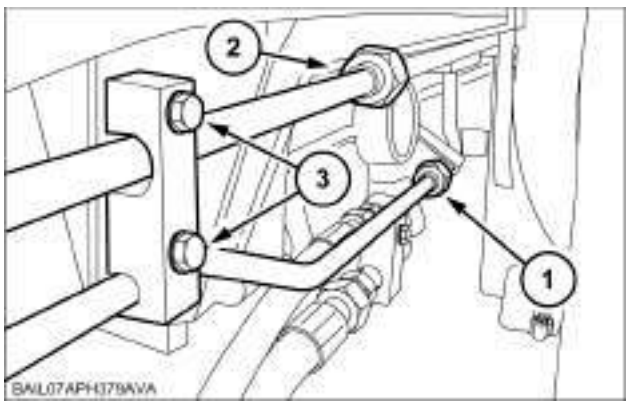
BAIL12APH155AVA 27

28. Disconnect the engine earth connector.



BAIL10CVT433AVA 28

29. Disconnect the diff lock supply pipe **(1)** and pneumatic brake supply pipe **(2)**.
Remove the pipe retaining bracket **(3)** and remove the pipes.



BAIL07APH379AVA 29

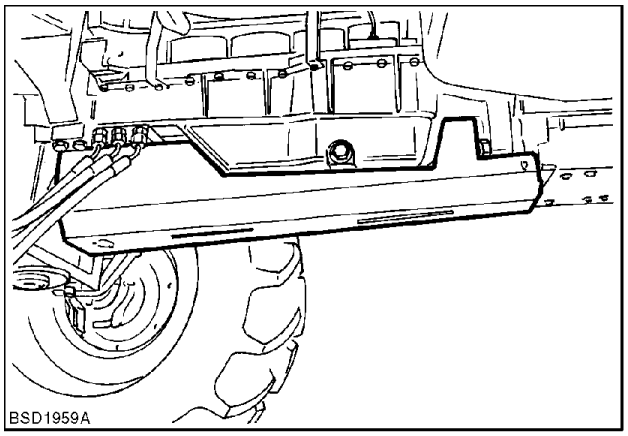
NOTE: *Repeat the operation on both sides of the vehicle.*

30.

Vehicles with standard front axle

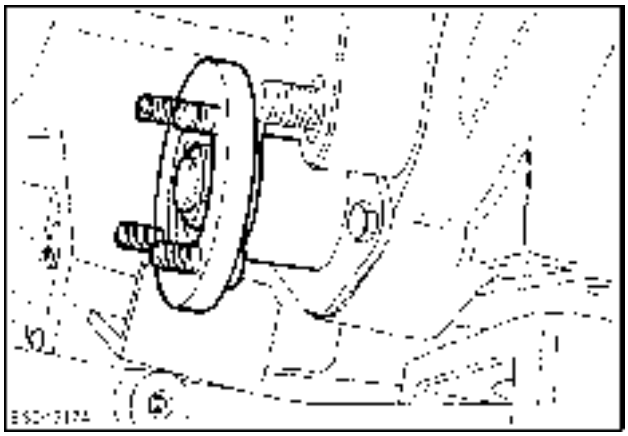
31. Remove the front wheel drive shaft guard and drive shaft.

NOTE: *The type of drive shaft fitted is dependant on type of front axle installed.*



BSD1959A 30

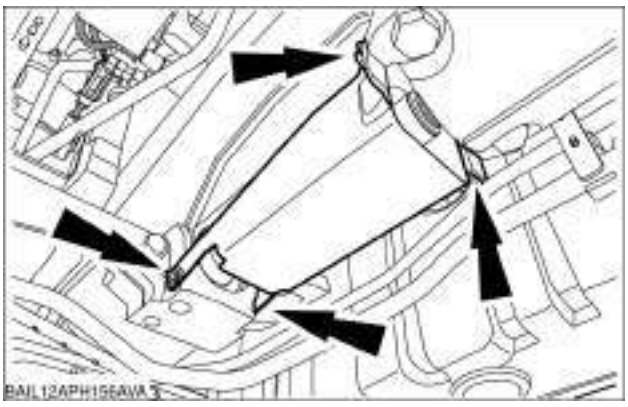
32. Remove the drive shaft flange, where fitted.



BSD1917A 31

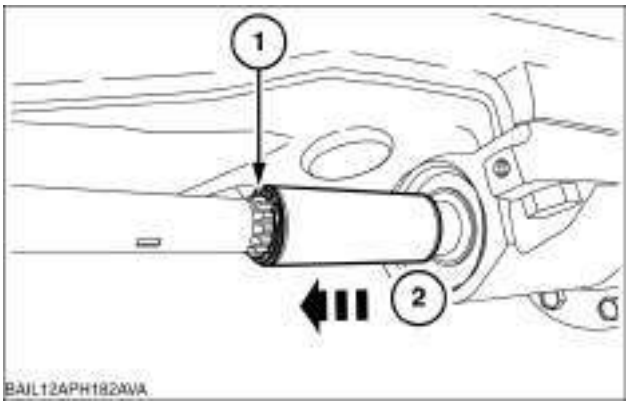
Vehicles with suspended front axle

33. Remove the front wheel drive shaft guard.



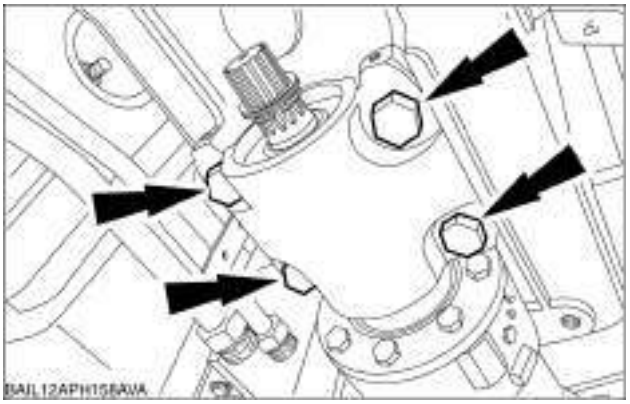
BAIL12APH156AVA 32

34. Remove the circlip **(1)**.
Slide the drive shaft sleeve **(2)**.



BAIL12APH182AVA 33

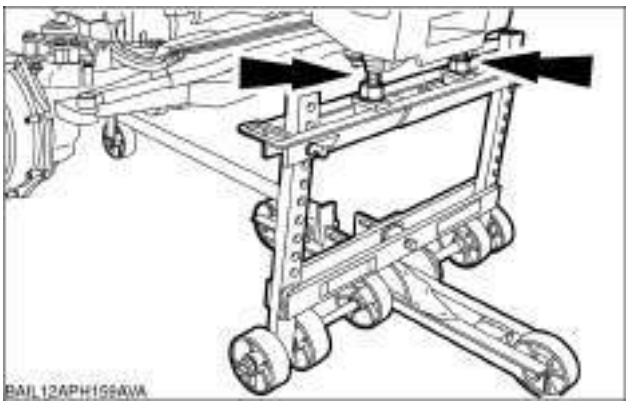
35. Disconnect the drive shaft bearing carrier.



BAIL12APH158AVA 34

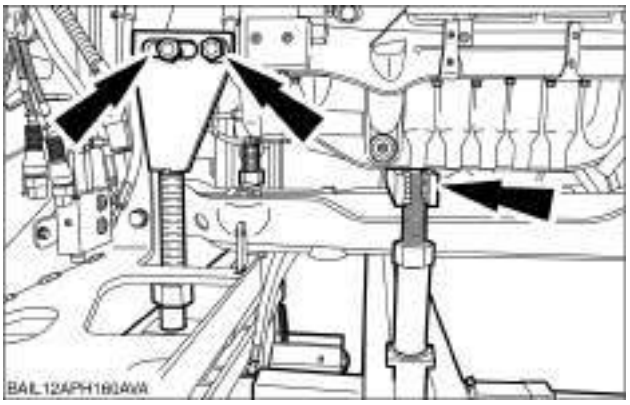
All vehicles

36. Using the tractor splitting equipment **380040228** Install the larger wheeled part of the splitting equipment under the front weight carrier.



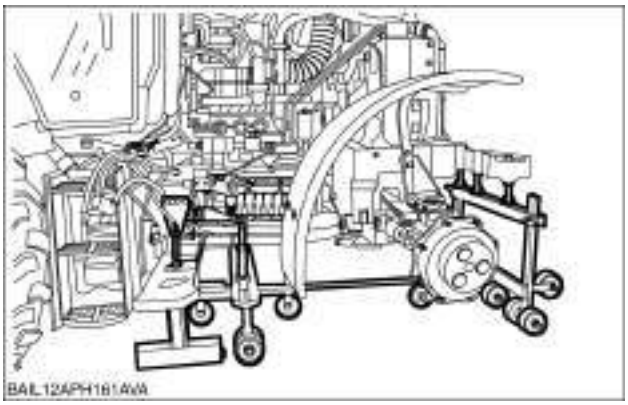
BAIL12APH159AVA 35

37. Position the static part of the splitting equipment under the transmission and secure to the transmission.
Install the smaller wheeled part of the splitting equipment under the engine.



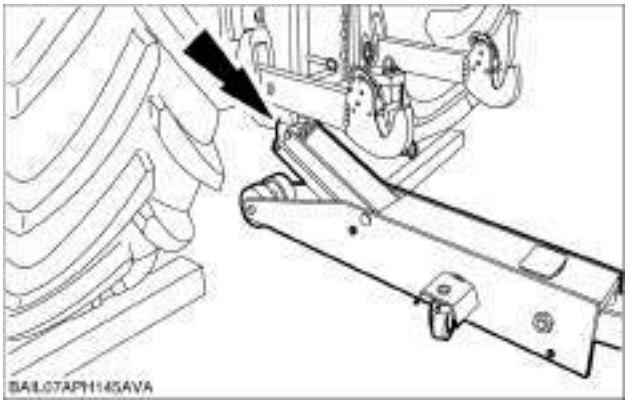
BAIL12APH160AVA 36

38. Connect the two pieces of the wheeled splitting gear together with the alignment bar.



BAIL12APH161AVA 37

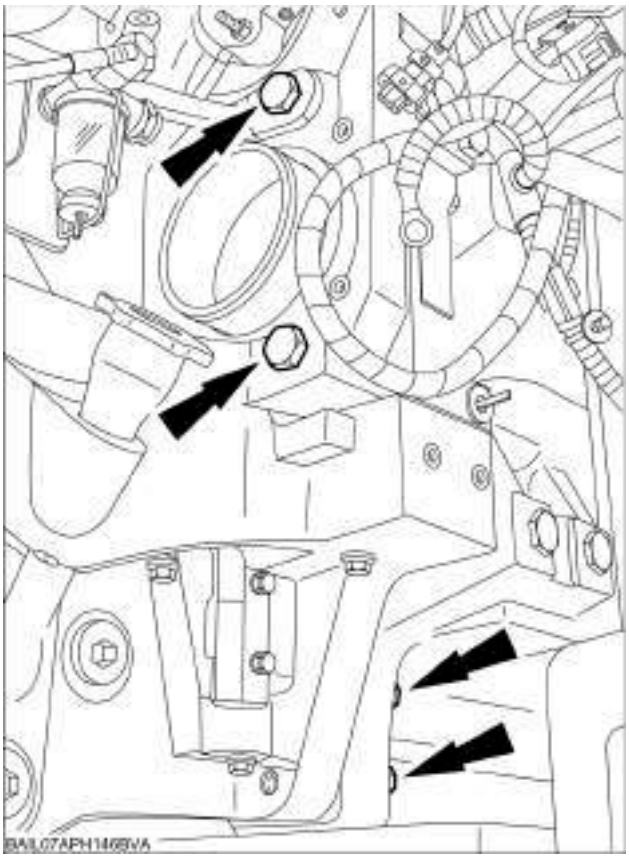
39. Support the rear of the vehicle.



BAIL07APH145AVA 38

40. Remove the left-hand side engine to transmission securing bolts.

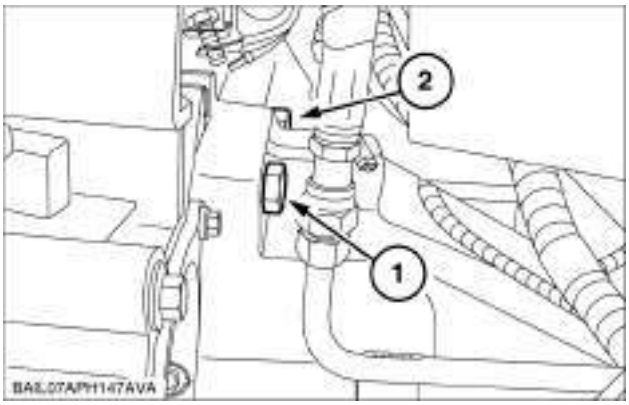
NOTE: *Repeat this step for the right-hand side.*



BAIL07APH146BVA 39

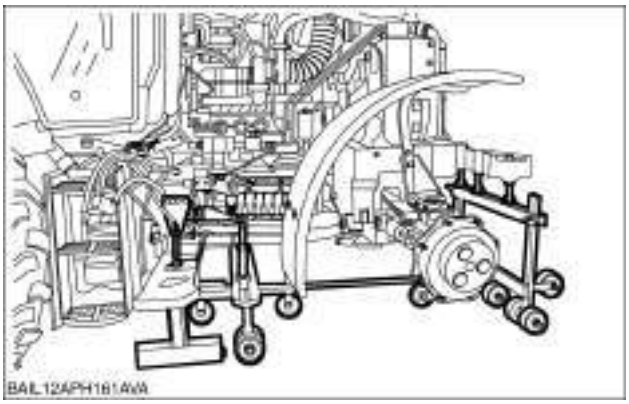
41. Remove the centre engine to transmission securing bolt **(2)**. Remove the top left-hand engine to transmission securing bolt **(1)**.

NOTE: *Repeat this step for the right-hand side.*



BAIL07APH147AVA 40

42. Separate the engine from the transmission.



BAIL12APH161AVA 41

Engine - Connect

PROFI 6125 Classic ET	WE
PROFI 6125 ET	WE
PROFI 6140 Classic ET	WE
PROFI 6140 ET	WE

⚠ WARNING

Heavy objects!
Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders.
Failure to comply could result in death or serious injury.

W0398A

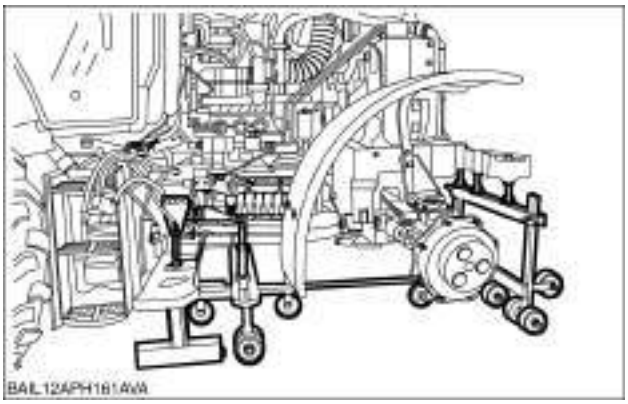
⚠ WARNING

Avoid injury!
Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.
Failure to comply could result in death or serious injury.

W0208A

All vehicles

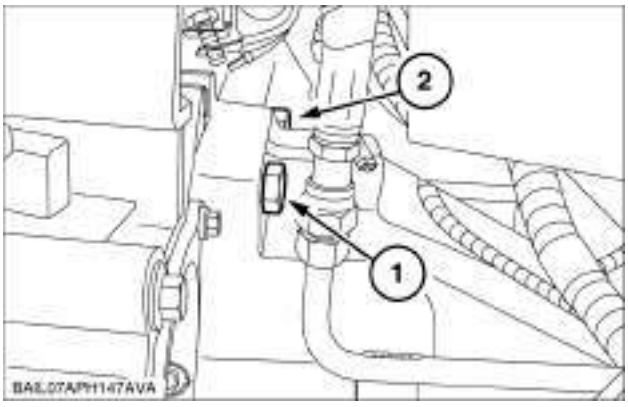
1. Thoroughly clean the engine to transmission mating surfaces and apply a bead of sealant.
2. Align the front support and engine assembly to the transmission and relocate.
   Tighten to **285-315 Nm** (**210-232 lb ft**).



BAIL12APH161AVA 1

3. Install the centre engine to transmission securing bolt **(2)**. Install the top left hand engine to transmission securing bolt **(1)**. Tighten to **285-315 Nm** (**210-232 lb ft**).

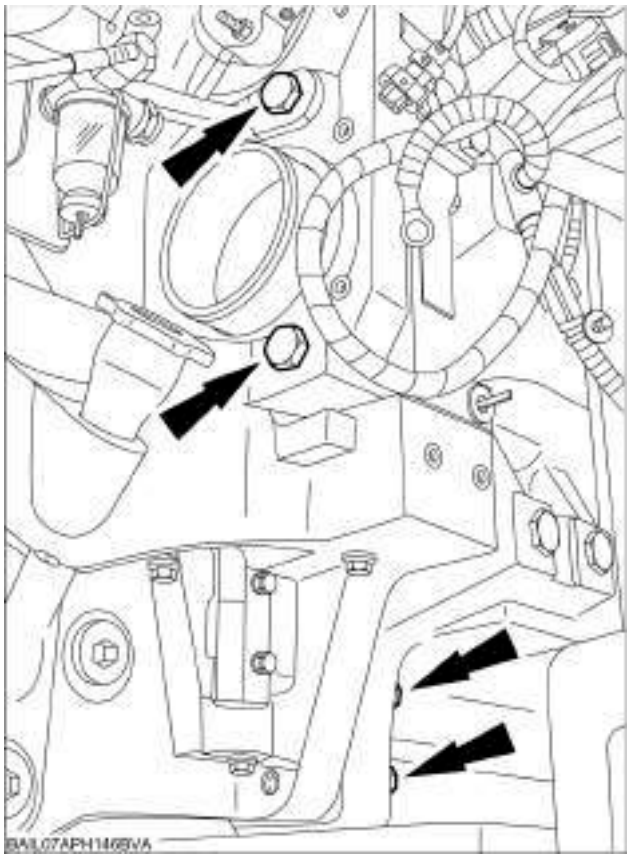
NOTE: *Repeat this step for the right-hand side.*



BAIL07APH147AVA 2

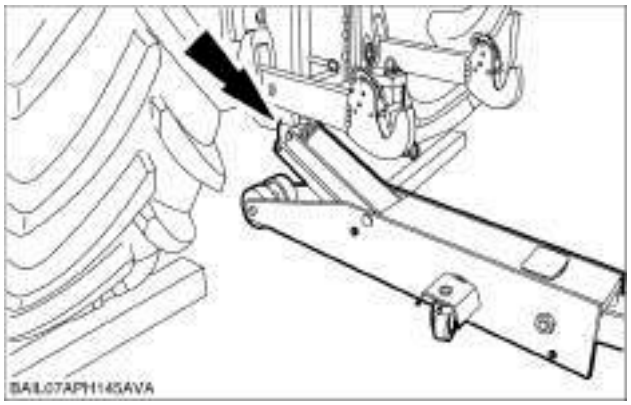
4. Install the left-hand side engine to transmission securing bolts.

NOTE: *Repeat this step for the right-hand side.*



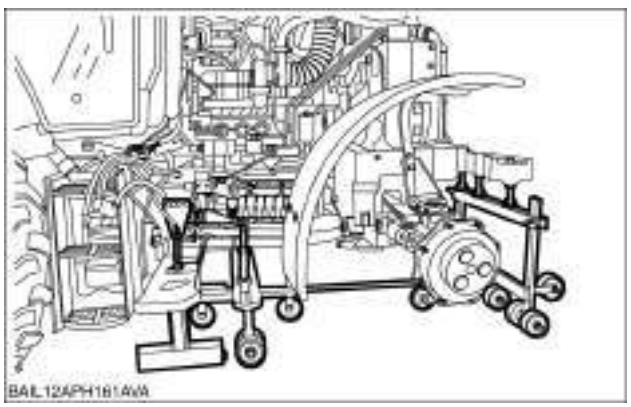
BAIL07APH146BVA 3

5. Remove the support from the rear of the vehicle.



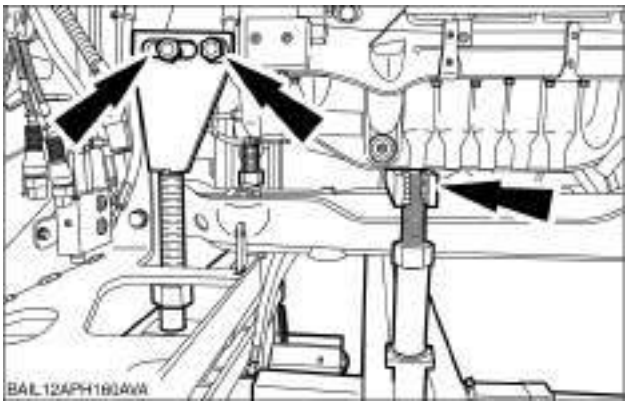
BAIL07APH145AVA 4

6. Disconnect the two pieces of the wheeled splitting gear **380040228** by removing the alignment bar.



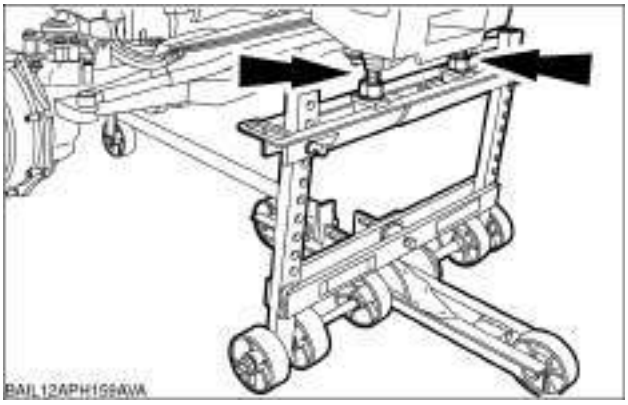
BAIL12APH161AVA 5

7. Remove the smaller wheeled part of the splitting equipment from under the engine.
   Remove the splitting equipment securing bolts from the transmission.
   Remove the splitting equipment from under the transmission.



BAIL12APH160AVA 6

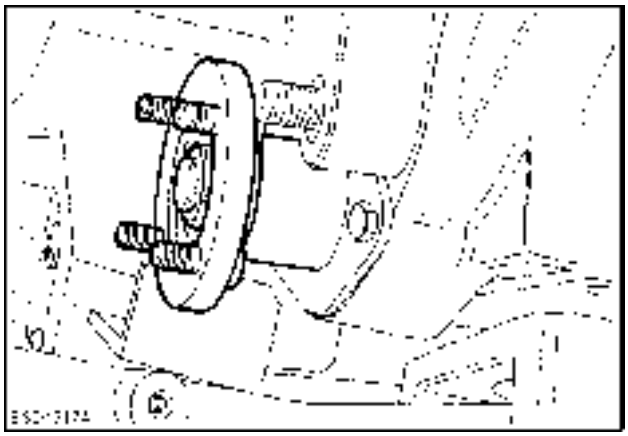
8. Place suitable axle stands under the front axle and support the vehicle. .
9. Remove the larger wheeled part of the splitting equipment from under the front weight carrier.



BAIL12APH159AVA 7

Vehicles with standard front axle

10. Install the drive shaft flange (if equipped).



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