ORIGINAL INSTRUCTIONS

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# Farmall 115C
Tractor

# OPERATOR'S MANUAL

**Part number 47537111**
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May 2013

CASE IH AGRICULTURE

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# 2 - SAFETY INFORMATION

## Safety rules and signal word definitions

### 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 death or injury.

Throughout this manual and on machine decals, 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 that, if not avoided, will result in death or serious injury. The color associated with DANGER is RED.

⚠ WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury. The color associated with WARNING is ORANGE.

⚠ CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury. The color associated with CAUTION is YELLOW.

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

### Machine safety

***NOTICE:*** *Notice indicates a situation that, if not avoided, could result in machine or property damage. The color associated with Notice is BLUE.*

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 that clarifies steps, procedures, or other information in this manual.*

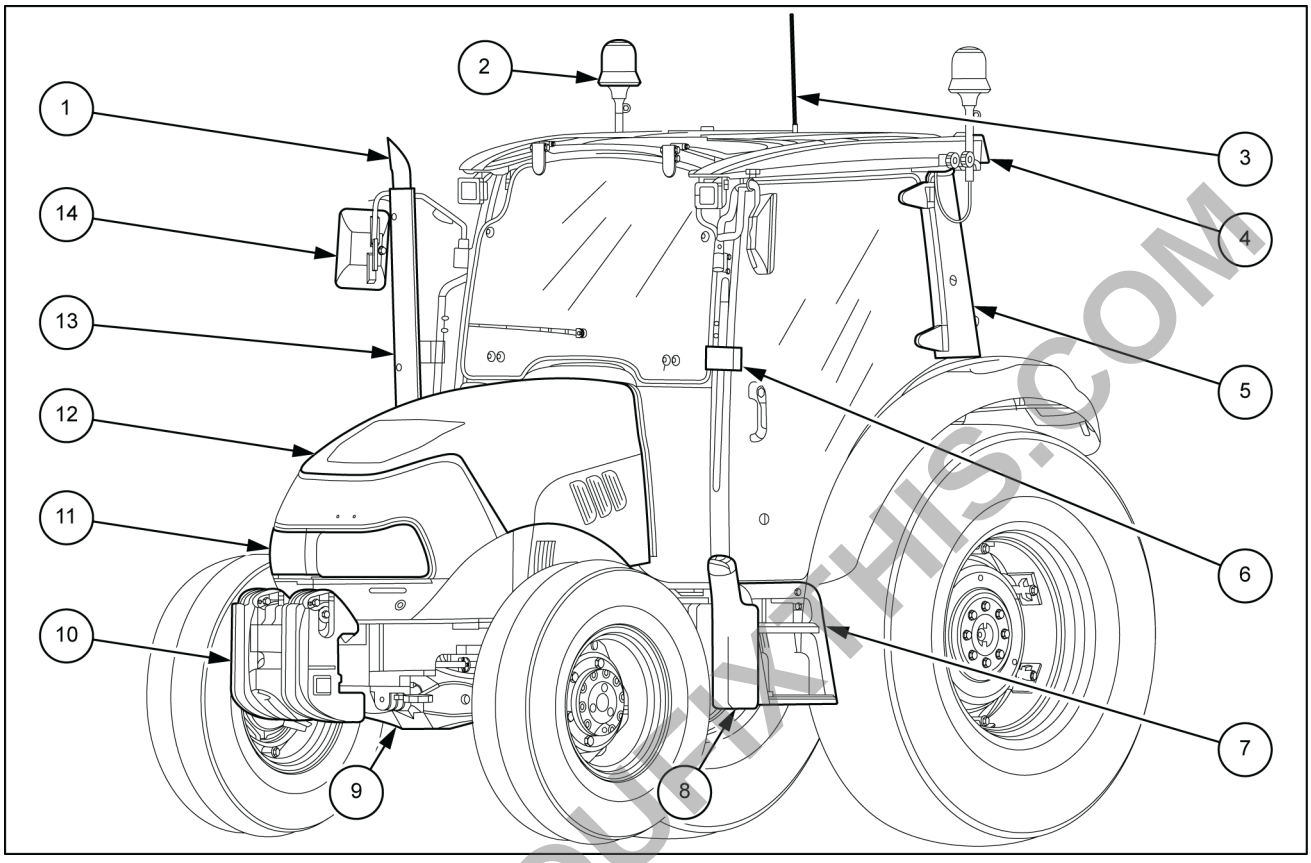
Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.



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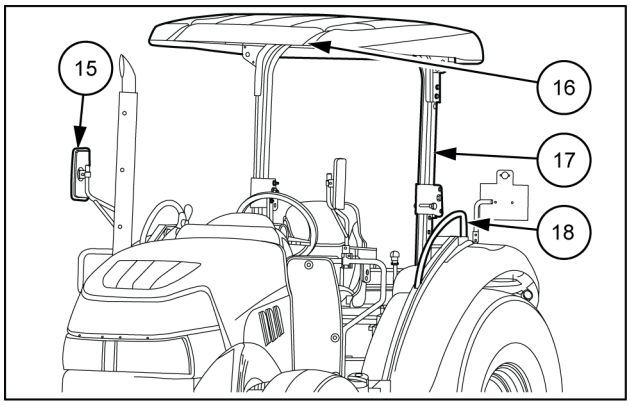
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# Component Identification




DCUTLCEIT001S1F 1

1. Exhaust stack
2. Rotating beacon
3. Radio antenna
4. Front work lights
5. Cab
6. Direction indicators
7. Steps
8. Fuel tank
9. Front axle
10. Ballast
11. Front lights
12. Bonnet/engine
13. Exhaust pipe guard
14. Cab rearview mirror
15. Rearview mirror for roll over protection structure (ROPS)
16. Canopy for roll over protection structure (ROPS)
17. Roll Over Protective Structure (ROPS)
18. Handrail handle for roll over protection structure (ROPS)




DCUTLCEIT002S1A 2

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# 8 - TROUBLESHOOTING

## FAULT CODE RESOLUTION

## TROUBLESHOOTING ENGINE

**⚠ WARNING**

**Avoid injury! Always do the following before lubricating, maintaining, or servicing the machine.**
1. **Disengage all drives.**
2. **Engage parking brake.**
3. **Lower all attachments to the ground, or raise and engage all safety locks.**
4. **Shut off engine.**
5. **Remove key from key switch.**
6. **Switch off battery key, if installed.**
7. **Wait for all machine movement to stop.**

**Failure to comply could result in death or serious injury.**

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**⚠ WARNING**

**Improper operation or service of this machine can result in an accident.**
**If you do not understand a maintenance procedure, or doubt your ability to perform a maintenance procedure correctly, see your authorized dealer.**
**Failure to comply could result in death or serious injury.**

W0157A

| Problem | Possible Cause | Correction |
|---|---|---|
| **The engine will not start or starts with difficulty** | Incorrect starting procedure | See starting procedure |
| | Fuel level low or empty | Check the fuel level |
| | Air in fuel system | Bleed fuel system |
| | Engine oil viscosity not right | Use oil of right viscosity |
| | Fuel not suitable for ambient temperature | Use correct type of fuel for temperature conditions |
| | Fuel system contaminated | Clean system |
| | Fuel filter clogged | Replace filter element |
| | Fuel injector fault | Contact your dealer |
| | Battery isolator activated, or fuse and relay faulty | Disconnect the battery isolator, check and if necessary change the fuse or the relay |
| **The engine does not run properly and/or cuts out** | Fuel system contaminated | Clean system |
| | Fuel injector fault | Contact your dealer |
| **Engine does not develop full power** | Engine overload | Change to lower gear or reduce load |
| | Air filter clogged | Carry out maintenance on air filter |
| | Incorrect fuel type | Use the right fuel |
| | Low engine operating temperature | Check thermostat |
| | Fuel injector fault | Have your dealer check the injectors |
| | Implement incorrectly set | See equipment manual |
| | Improper valve clearance | Check and adjust |
| | Idling speed too low | Contact your dealer |
| **Abnormal engine knocking** | Oil level low | Top up fluid level |
| | Oil pressure low | Contact your dealer |
| **Low engine operating temperature** | Thermostat malfunction | Replace thermostat |
| | Fan viscous coupling malfunction | Contact your Dealer |
| **Oil pressure low** | Oil level low | Add oil as required |
| | Oil grade or viscosity wrong | Drain and refill with oil of correct grade and viscosity |



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## MAINTENANCE CHART

# Maintenance Chart

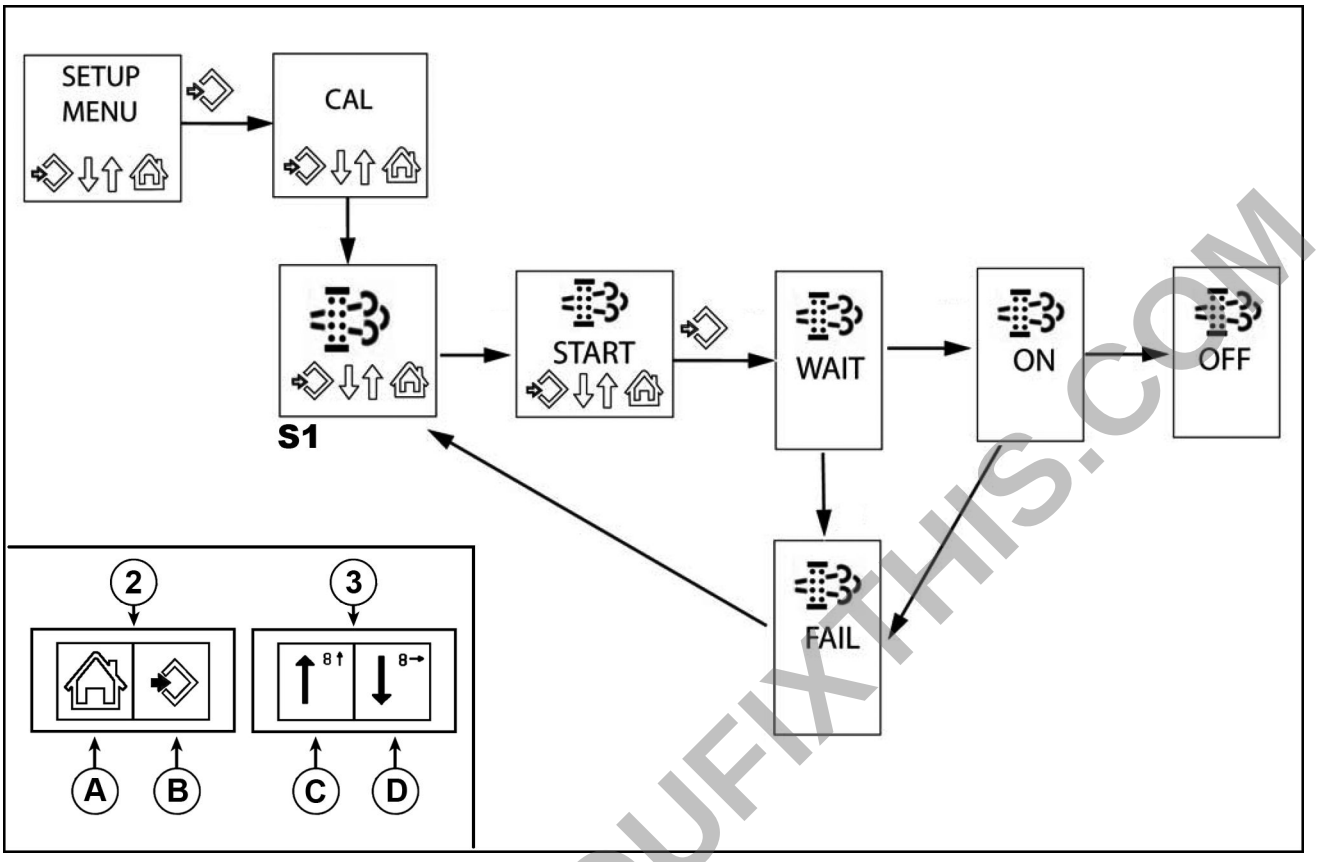
| Interval | Page no. | Maintenance action | No. of pts. | Check | Filling | Adjust | Cleaning | Drain fluid | Grease | Replace | Tighten | Change fluid |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| As required | **7-13** | Radiator expansion tank | | X | | | | | | | | |
| | **7-13** | Winshield washer reservoir | | | X | | | | | | | |
| | **7-13** | Air conditioning - Dehydration filter | | X | | | | | | | | |
| | **7-14** | Distributor oil recovery pan | | X | | | | | | | | |
| | **7-14** | Radiator | | X | | | | | | | | |
| | **7-14** | Brakes | | | | X | | | | | | |
| | **7-15** | Machine lights | | X | | | | | | | | |
| | **7-15** | Tire pressure | | X | | | | | | | | |
| | **7-16** | Clutch pedal adjustment | | | | X | | | | | | |
| AT WARNING MESSAGE DISPLAY | **7-17** | Dry air filter - External cartridge | | | | | X | | | | | |
| | **7-18** | Brake fluid level | | | X | | | | | | | |
| | **7-18** | Fuel filter water drain | | | | | | X | | | | |
| Every 10 hours or daily | **7-19** | Engine oil level | | X | | | | | | | | |
| Every 50 hours | **7-20** | Rear three-point hitch | | | | | | | X | | | |
| | **7-20** | Front axle | | | | | | | X | | | |
| Every 100 hours | **7-21** | Air conditioning condenser | | | | | X | | | | | |
| | **7-21** | Transmission oil heat exchanger | | | | | X | | | | | |
| | **7-21** | Intercooler | | | | | X | | | | | |
| | **7-22** | Cab air filters | | | | | X | | | | | |
| | **7-22** | Cab recirculated air filter | | | | | X | | | | | |
| | **7-23** | Alternator belt | | X | | | | | | | | |
| | **7-23** | Compressor belt | | X | | | | | | | | |
| Every 300 hours | **7-24** | Hydraulic circuit oil filter | | | | | | | | X | | |
| | **7-24** | Auxiliary services oil filter | | | | | | | | X | | |
| | **7-25** | Dry air filter - External cartridge | | | | | X | | | | | |
| | **7-25** | Transmission and hydraulic lift | | X | | | | | | | | |
| | **7-26** | Front Axle Oil | | X | | | | | | | | |
| | **7-26** | Front axle final drives | | | | | | | X | | | |
| | **7-26** | Front axle spindle | | | | | | | X | | | |
| Every 600 hours | **7-27** | Change engine oil and filter | | | | | | | | X | | |
| | **7-28** | Replacing the fuel filters | | | | | | | | X | | |
| | **7-28** | Fuel prefilter | | | | | X | | | | | |
| | **7-29** | Wheel bolt torque | | | | | | | | | X | |
| Every 1200 hours or annually | **7-30** | Rear wheel hub | | | | | | | X | | | |
| | **7-30** | Replacing cab air filters | | | | | | | | X | | |
| | **7-30** | Replacing air filters | | | | | | | | X | | |
| | **7-31** | Fuel tank drain | | | | | | X | | | | |
| | **7-31** | Blow-by filter | | | | | | | | X | | |

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## Manual regeneration of the particulate filter DPF




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To be able, when necessary, to activate manual regeneration, it is necessary to stop work for the entire duration of the procedure ( **15 — 20 min**) and set up the following conditions:

- engine running, machine stationary and hand brake on
- hand throttle at minimum position
- foot throttle released
- Power Take Off (PTO) not engaged
- hydraulic system not active

***NOTE:*** *should the above-mentioned conditions change during the entire process of regeneration, the operation is stopped.*

Proceed as follows to activate forced regeneration:

- Press the switch **(2)** on the side of the symbol **(B)** for longer than three seconds to access the programming menu The central monitor will display **"SETUP MENU"**. Release the side with the symbol **(B)**.
- Press the switch **(3)** on the side of the symbol **(D)** for a certain number of consecutive times until the monitor displays the filter symbol **(S1)**.
- Press the switch **(2)** on the side with the symbol **(B)**.
- If manual filter regeneration is requested, the monitor will automatically display **"START"** with the filter symbol.
- Press the switch **(2)** on the side of the symbol **(B)** to move on to the message **"WAIT"**. Filter regeneration now begins. In this phase, if everything proceeds normally, no action is required by the operator and the control unit will automatically display the various phases of the procedure.
- At the end of regeneration the monitor will display **"OFF"** with the filter symbol. After two seconds the control unit will automatically return to the initial condition. Press the switch **(2)** on the side of the symbol **(A)** for a certain number of times until you exit the programming menu.

***NOTE:*** *If during manual regeneration the operator modifies the conditions described above, or other conditions connected with the engine are not satisfactory, regeneration is stopped. The stop is signalled to the operator by the*



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## MINIMUM TIGHTENING VALUES FOR NUTS AND BOLTS

| Screw dimensions | Class | |
|---|---|---|
| | 8.8 | 10.9 |
| M8 | 23 N·m (17 lb ft) | 33 N·m (24 lb ft) |
| M8x1 | 25 N·m (18 lb ft) | 35 N·m (26 lb ft) |
| M10 | 46 N·m (34 lb ft) | 65 N·m (48 lb ft) |
| M10x1.25 | 49 N·m (36 lb ft) | 69 N·m (51 lb ft) |
| M12 | 80 N·m (59 lb ft) | 110 N·m (81 lb ft) |
| M12x1.5 | 84 N·m (62 lb ft) | 118 N·m (87 lb ft) |
| M12x1.25 | 88 N·m (65 lb ft) | 123 N·m (91 lb ft) |
| M14 | 130 N·m (96 lb ft) | 180 N·m (133 lb ft) |
| M14x1.5 | 138 N·m (102 lb ft) | 190 N·m (140 lb ft) |
| M16 | 190 N·m (140 lb ft) | 270 N·m (199 lb ft) |
| M16x1.5 | 210 N·m (155 lb ft) | 290 N·m (214 lb ft) |
| M18 | 270 N·m (199 lb ft) | 380 N·m (280 lb ft) |
| M18x2 | 280 N·m (207 lb ft) | 400 N·m (295 lb ft) |
| M18x1.5 | 300 N·m (221 lb ft) | 420 N·m (310 lb ft) |
| M20 | 380 N·m (280 lb ft) | 530 N·m (391 lb ft) |
| M20x2 | 400 N·m (295 lb ft) | 560 N·m (413 lb ft) |
| M20x1.5 | 420 N·m (310 lb ft) | 590 N·m (435 lb ft) |
| M22 | 510 N·m (376 lb ft) | 720 N·m (531 lb ft) |
| M22x2 | 540 N·m (398 lb ft) | 750 N·m (553 lb ft) |
| M22x1.5 | 560 N·m (413 lb ft) | 790 N·m (583 lb ft) |
| M24 | 630 N·m (465 lb ft) | 890 N·m (656 lb ft) |
| M24x2 | 680 N·m (502 lb ft) | 950 N·m (701 lb ft) |
| M27 | 930 N·m (686 lb ft) | 1310 N·m (966 lb ft) |
| M27x2 | 995 N·m (734 lb ft) | 1400 N·m (1033 lb ft) |
| M30 | 1260 N·m (929 lb ft) | 1770 N·m (1305 lb ft) |
| M30x2 | 1370 N·m (1010 lb ft) | 1930 N·m (1423 lb ft) |
| | | |
| 5/8” UNC | 175 N·m (129 lb ft) | 245 N·m (181 lb ft) |
| 5/8” UNF | 200 N·m (148 lb ft) | 280 N·m (207 lb ft) |
| 3/4” UNC | 380 N·m (280 lb ft) | 530 N·m (391 lb ft) |
| 3/4” UNF | 420 N·m (310 lb ft) | 590 N·m (435 lb ft) |

## STANDARD TIGHTENING TORQUES FOR HYDRAULIC PIPES AND FITTINGS

| TUBE NUTS FOR **37 °** FLARED FITTINGS | | | | | CAPS WITH BOSS FOR O--RING, LOCK NUTS FOR ADJUSTABLE FITTINGS, JIC SWIVEL SEATS **37 °** | |
|---|---|---|---|---|---|---|
| SIZE | TUBE OD | THREAD SIZE | Min. | Max | Min. | Max |
| 4 | 6.4 mm (0.3 in) | 7/16--20 | 12 N·m (9 lb ft) | 16 N·m (9 lb ft) | 8 N·m (6 lb ft) | 14 N·m (10 lb ft) |
| 5 | 7.9 mm (0.3 in) | 1/2--20 | 16 N·m (12 lb ft) | 20 N·m (15 lb ft) | 14 N·m (10 lb ft) | 20 N·m (15 lb ft) |
| 6 | 9.5 mm (0.4 in) | 9/16--18 | 29 N·m (21 lb ft) | 33 N·m (24 lb ft) | 20 N·m (15 lb ft) | 27 N·m (20 lb ft) |
| 8 | 1.7 mm (0.1 in) | 3/4--18 | 47 N·m (35 lb ft) | 54 N·m (40 lb ft) | 34 N·m (25 lb ft) | 41 N·m (30 lb ft) |
| 10 | 15.9 mm (0.6 in) | 7/8--14 | 72 N·m (53 lb ft) | 79 N·m (58 lb ft) | 47 N·m (35 lb ft) | 54 N·m (40 lb ft) |
| 12 | 19.1 mm (0.8 in) | 1--1/16--12 | 104 N·m (77 lb ft) | 111 N·m (82 lb ft) | 81 N·m (60 lb ft) | 95 N·m (70 lb ft) |
| 14 | 22.2 mm (0.9 in) | 1--3/16--12 | 122 N·m (90 lb ft) | 136 N·m (100 lb ft) | 95 N·m (70 lb ft) | 109 N·m (80 lb ft) |
| 16 | 25.4 mm (1.0 in) | 1--5/16--12 | 149 N·m (110 lb ft) | 163 N·m (120 lb ft) | 108 N·m (80 lb ft) | 122 N·m (90 lb ft) |
| 20 | 31.8 mm (1.3 in) | 1--5/8--12 | 190 N·m (140 lb ft) | 204 N·m (150 lb ft) | 129 N·m (95 lb ft) | 156 N·m (115 lb ft) |
| 24 | 38.1 mm (1.5 in) | 1--7/8--12 | 217 N·m (160 lb ft) | 237 N·m (175 lb ft) | 163 N·m (120 lb ft) | 190 N·m (140 lb ft) |
| 32 | 50.8 mm (2.0 in) | 2--1/2--12 | 305 N·m (225 lb ft) | 325 N·m (240 lb ft) | 339 N·m (250 lb ft) | 407 N·m (300 lb ft) |

***NOTE:*** *The tightening torques shown above are recommended for fittings that are not plated, cadmium-plated or galvanized, for dry installations or in contact with the fluid, and for moulded or brazed swivel nuts.*

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# Technical data

| ENGINE DATA | |
|---|---|
| Engine make | **FPT** |
| Engine type: | |
| **Farmall 115C** | **F5DFL413H** |
| Emission level | **Tier 4** |
| Clutch | **305 mm** (**12 in**) |
| Aspiration | Turbocharged |
| Number of cylinders | **4** |
| Bore x Stroke | **99 mm** (**3.9 in**) X **110 mm** (**4.3 in**) |
| Displacement | **3400 cm³** |
| Compression ratio | **17± 0,5:1** |
| Engine power **(ECE R120)**: | |
| **Farmall 115C** | **84 kW** (**114 Hp**) @ **2300 RPM** |
| Torque increase: | |
| **Farmall 115C** | **32.2 %** |
| Rated Speed | **2300 RPM** |
| Maximum torque | **1500 RPM** |

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# INSTRUCTOR'S SEAT

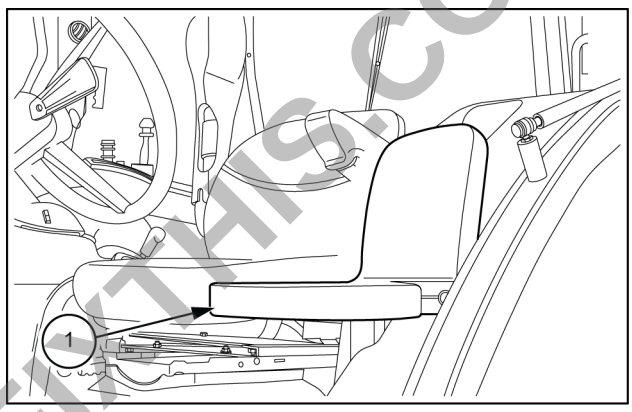
## Instructional seat - Localisation overview

**⚠ WARNING**

**Fall hazard!**
**The instructional seat shall only be used when training a new operator or when a service technician is diagnosing a problem. Do not permit others, especially children, to ride in the seat. Keep the cab door(s) closed. Wear a seat belt at all times.**
**Failure to comply could result in death or serious injury.**

**W0301A**

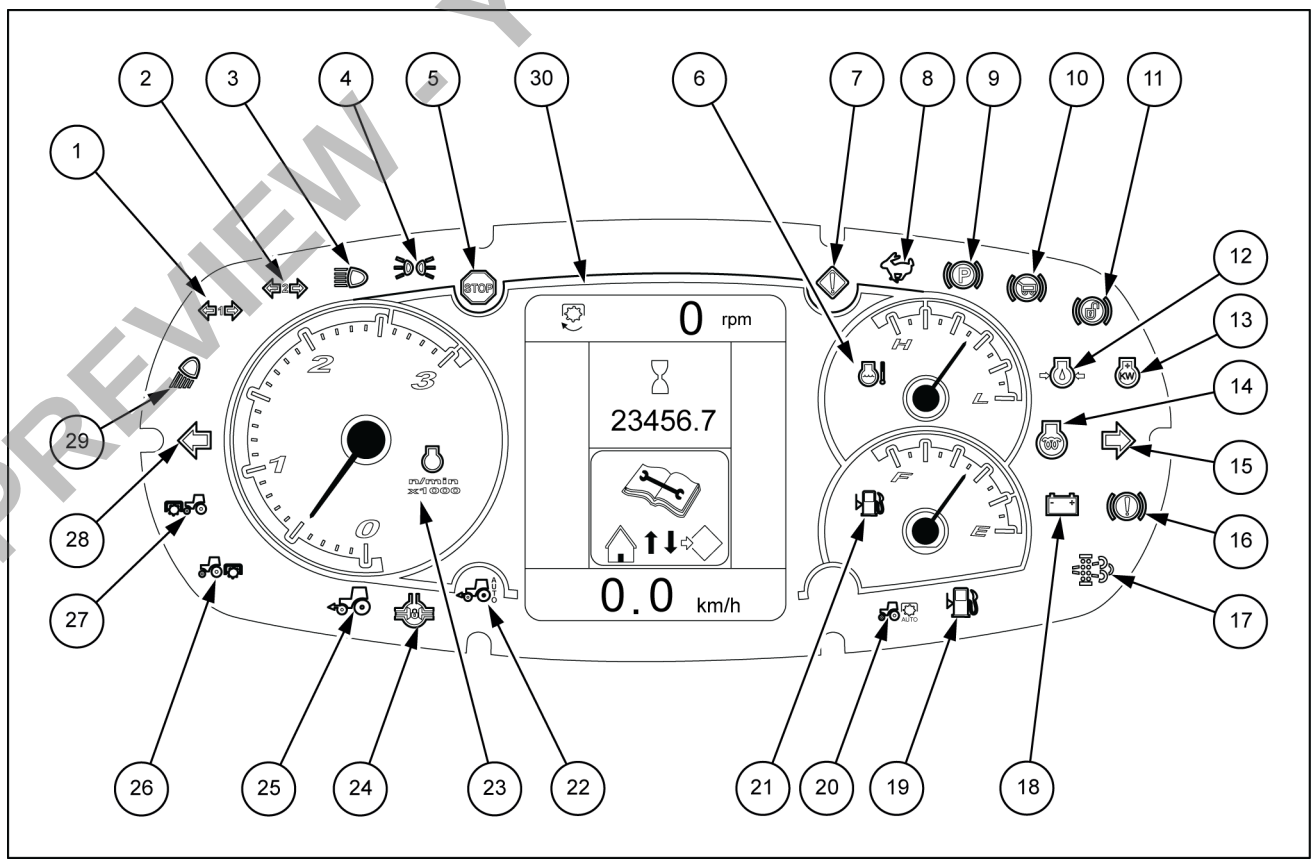
Only use the instructional seat for training new operators or when a technician is diagnosing a problem. The occupant must wear a seat belt. Do not allow others to ride in the seat. When not required, fold **(1)** away the lower part of the seat.




DCUTLNEIT055S3A 1

# FORWARD CONTROLS

## Instrument cluster




DCUTLBRCE002S3F 1



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