



Fiat

Service Manual

**1180, 1180DT, 1280,
1280DT, 1380, 1380DT,
1580, 1580DT, 1880
& 1880DT**

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1180 - 1280 - 1380

1580 - 1880

MANUAL PREVIEW

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IDENTIFICATION DATA

Marketing code:

- 2-wheel drive
- 4-wheel drive

Engineering code:

- 12-speed, 2-wheel drive
- 12-speed, 2-wheel drive with reverser
- 12-speed, 2-wheel drive with high speed bevel drive
- 24-speed, 2-wheel drive
- 24-speed, 2-wheel drive with high speed bevel drive

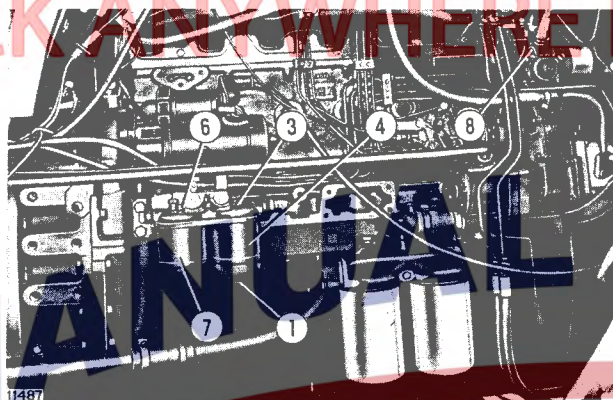
1180 1180 DT	1380 1380 DT	1580 1580 DT	1880 1880 DT
658.100.000	659.100.000	660.200.000	660.100.000
658.100.000 var. 720.110	659.100.000 var. 720.110	660.200.000 var. 720.110	660.100.000 var. 720.110
658.100.000 var. 720.320	659.100.000 var. 720.320	—	—
658.100.000 var. 720.111	659.100.000 var. 720.111	660.200.000 var. 720.111	660.100.000 var. 720.111
658.100.000 var. 720.111 + var. 720.320	659.100.000 var. 720.111 + var. 720.320	—	—



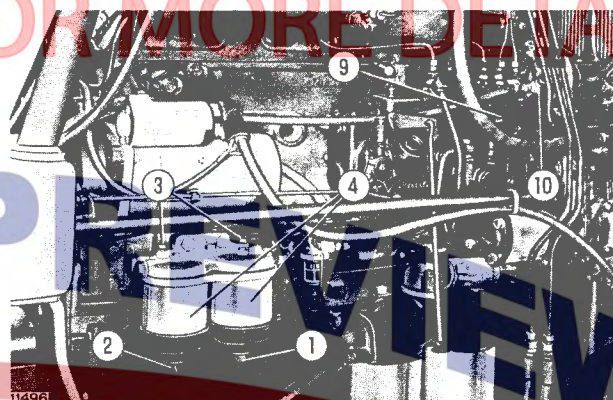
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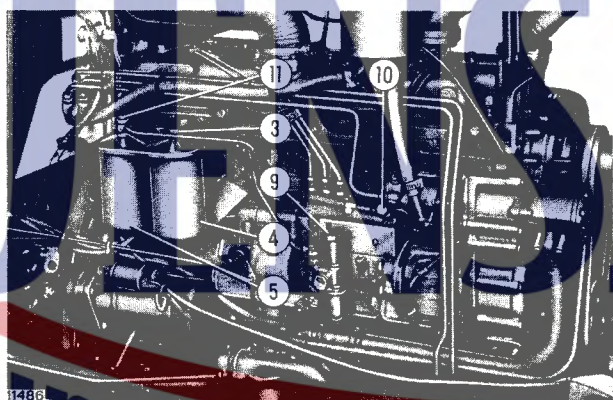
ENGINE: Fuel system



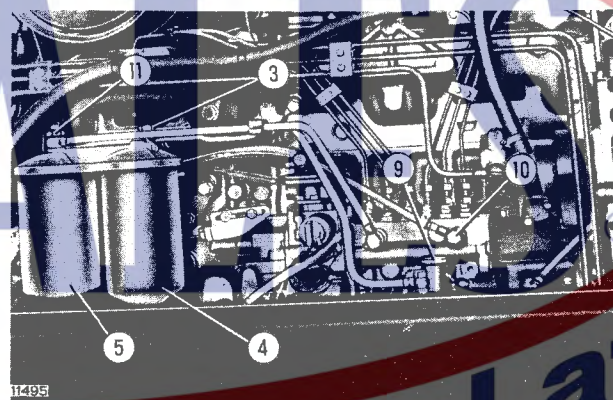
a



b



c



d

Venting fuel circuit.

a. 1180 - b. 1380 - c. 1580 - d. 1880 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11. See text.

- 1580 and 1880, back off screw (3, figs. c and d) and replace cartridge inside container (4).

Every 800 hours:

- 1180, back off screw (6, fig. a) and replace cartridge (7);
- 1580 and 1880, unscrew filter (5, figs. c and d) from support and replace.

Following filter maintenance, bleed the fuel circuit as follows:

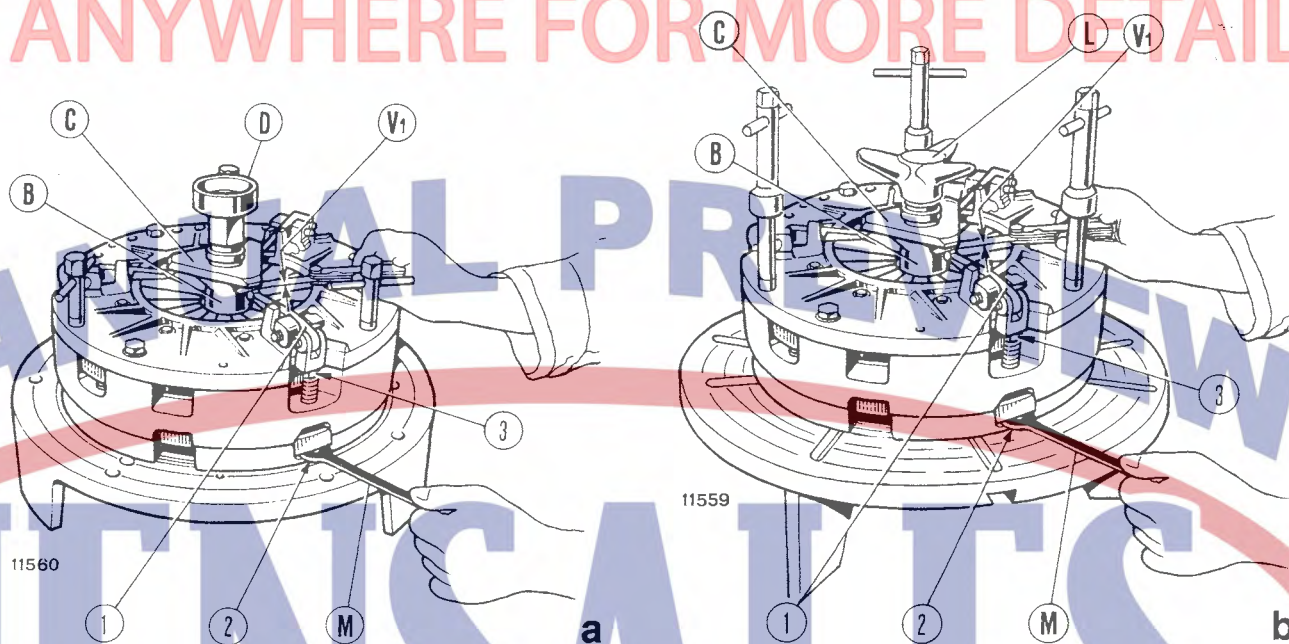
- 1180, back off plug (3, fig. a) through two turns and actuate lever (8) until the fuel issuing from the plug

is free from air bubbles. Tighten plug (3), repeat the above sequence on plug (6) and actuate lever (8) a few more times;

- 1380, 1580 and 1880, back off screws (3, fig. b, 1380) or screw (11, figs. c and d, 1580 and 1880) and priming knob (9) through two turns, and pump until the fuel issuing from orifice in screws (3 or 11) is free from air bubbles. Tighten screws (3 or 11) and back off connection (10) through two turns and actuate knob (9) until the fuel issuing from the connection is free from air bubbles. Retighten the connection and pump priming knob (9) ten more times.

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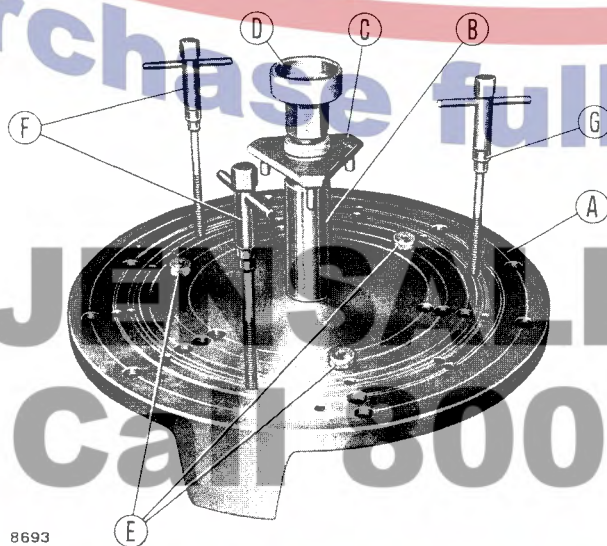
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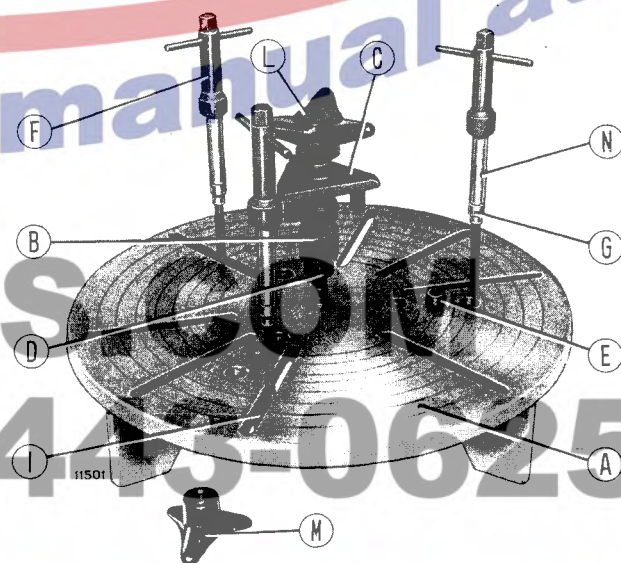
Checking and adjusting PTO clutch release lever alignment on the bench using tool 291291/2 (fig. a) or universal tool 293650 (fig. b).
B. Spacer - C. Register - D. Nut - L. Knob - M. Wrench from set 293763 - $V_1 = .1 \text{ mm} (.004 \text{ in})$ for universal tool 293650 or $1.2 \text{ mm} (.06 \text{ in})$ for tool 291291/2. Clearance to be obtained between release lever ends (1) and register (C) - 1. Release levers - 2 and 3. Adjusting screw and lock nut.

Note - On-bench and on-flywheel clutch adjustment may result in quite considerable differences in terms of positioning, a fact which does not affect clutch efficien-

cy being due to varying PTO driven plate thickness owing to machining tolerance build-up or wear, plus the magnification inherent in the high leverage ratio.



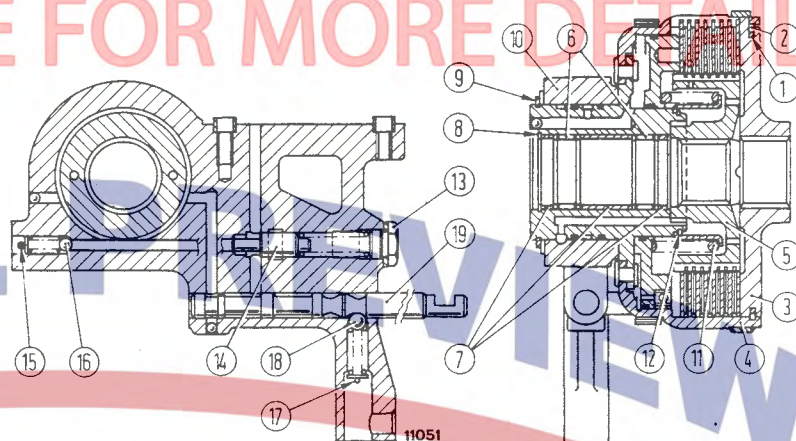
Parts of tool 291291/2 for LUK 12 1/2" clutch adjustment (1180).
A. Base plate 292598 - B. Spacer 50.001 (to be constructed with reference to diagram on page 3) - C. Register 292939/1 - D. Nut 292344 - E. Locators 293733 - F. Fasteners 291292/1 - G. Fastener guide bushings 291293/1.



Parts of universal tool 293650 for LUK 12 1/2" clutch adjustment (1180).
A. Base plate 293332/2 - B. Spacer 293741 - C. Register 293731 - D. Spacer locknut 293730 - E. Locators 293726 - F. Fasteners 293725 - G. Fastener guide bushings 293734 - I. Pads 293755 - L. Register knob 293739 - M. Locator knobs 293740 - N. Fastener spaces 292345.

PTO hydraulic clutch.

1. Locking wire - 2, 8, 9 and 12. Retaining rings - 3. Driven hub - 4. Clutch housing - 5. Drive hub - 6. Needle roller bearings - 7. Spacers - 10. Clutch support - 11. Clutch plate spring - 13. Capscrew - 14. Pressure relief valve - 15 and 17. Roll pins - 16. Clutch plate lube pressure limiting valve - 18. Control valve spool detent ball - 19. Control valve spool.



On late model tractors back off screw (42, page 4), to remove filter cartridge or back off nut (43) to remove filter with associated lower line (41).

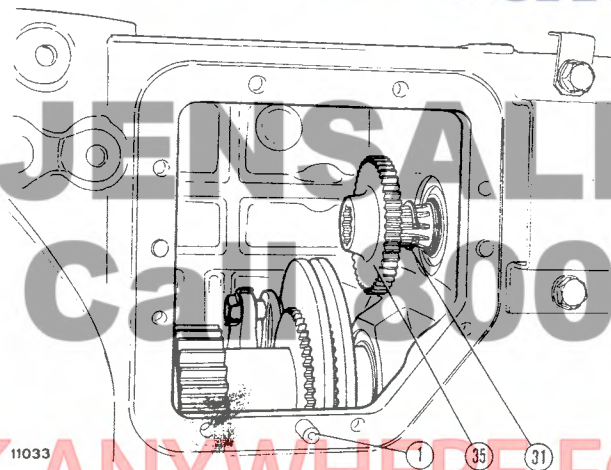
Disassemble clutch as follows:

- withdraw locking wire (1) using suitable pliers;
- push retaining ring (2) inward using a screwdriver and insert a steel strip between driven hub (3) and the clutch housing (4) as shown;
- push out driven hub (3) using a driver applied to internal spline end;

- remove drive hub, driven and drive plates, two needle roller bearings (6) and spacers (7);
- remove retaining rings (8 and 9) and withdraw clutch housing from support (10);

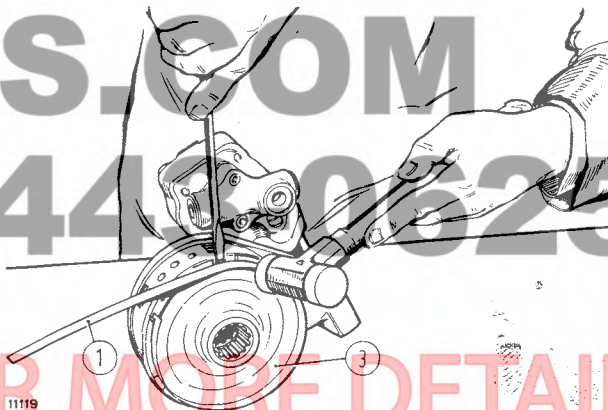
Note: Make a tool as shown on page 6 for spring (11) removal.

- install tool (1) on clutch housing as shown on page 6. Tighten nut to slightly compress spring and remove retaining ring (12);



Removing (installing) PTO clutch pump drive gear.

1. Pin securing clutch support to transmission housing - 31. Retaining ring - 35. Drive gear.



Removing PTO clutch driven hub.

1. Steel strip - 3. Driven hub.

POWER STEERING OVERHAUL

Hydrostatic steering system components and their operation are illustrated in the diagram of page 7, section 302.

Removal

Remove the unit from the tractor as follows:

- remove front and rear side panels, exhaust silencer, hood and air cleaner with associated support;
- drain oil from power steering tank, then disconnect battery negative terminal and the four power steering hoses;
- remove steering wheel and transmission and splitter control levers. Disconnect the instrument panel and tip backward toward seat;
- remove control board, back off the four capscrews securing steering column to power steering unit and retrieve the unit from the engine side.

Disassembly

Disassemble the steering unit as follows:

Note: Do not strike sheet metal cap (30, page 7, section 302) on rotary valve for any reason, otherwise

leakage will result necessitating renewal of the entire power steering unit.

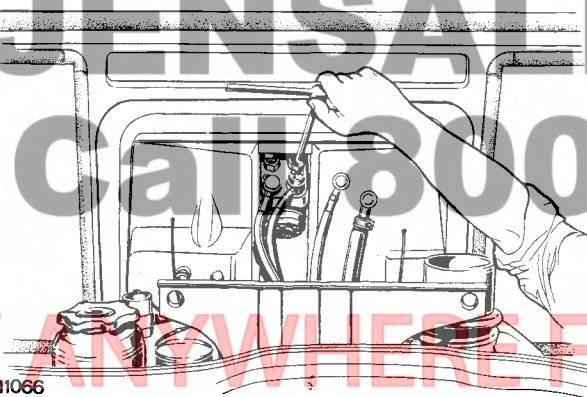
During removal and installation of sleeve (6) and rotary valve (5), pin (1) should be kept horizontal to prevent it from becoming unseated and falling into the grooves inside the steering unit, which will impede withdrawal of the assembly.

- remove the screws (C₁) retaining the cover to body (3) and withdraw the cover, cam ring (8) with attached rotor (9), thrust washer (10), spacer (12), rotor shaft (7), sleeve (6) with attached rotary valve (5), pin (1) and cup (28), followed by thrust bearing (29) in that order;
- overturn the steering unit and retrieve non-return valve ball (4); after removing the threaded stop.

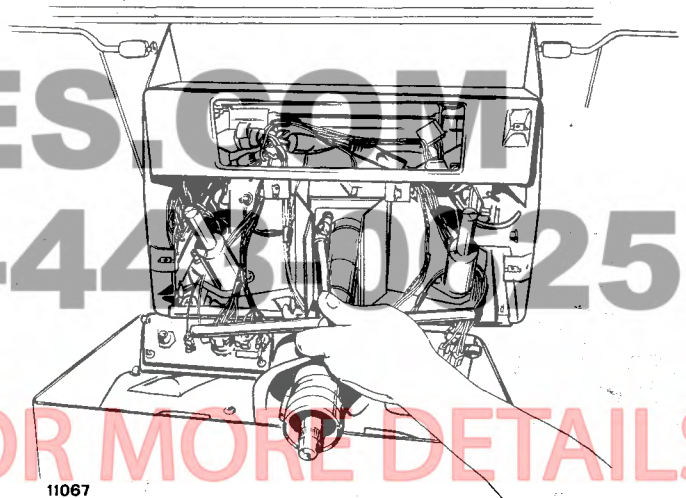
Assembly

Reverse the disassembly sequence noting the following points:

- always replace the seals;
- insert seal (31, page 7, section 302) between body and rotary valve (5) using tool 293388;
- if spring (2) is to be replaced, use tool 293389;



Disconnecting (connecting) power steering hoses.



Removing (installing) steering column from power steering body.