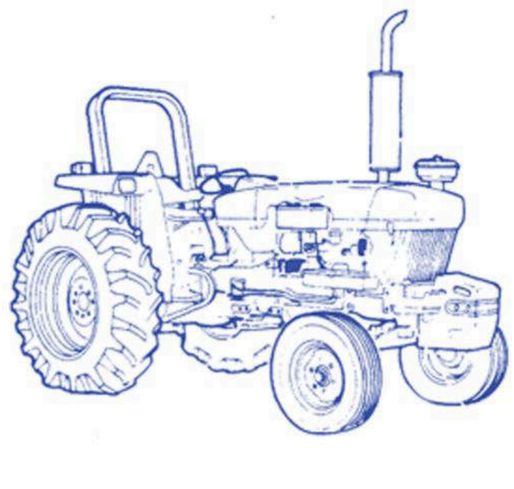


NEW HOLLAND

5620S
6610S
7610S
7010
8010
Tractors

REPAIR MANUAL

NEW HOLLAND AGRICULTURE

SERVICE

87032901

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The following pages are the collation of the contents pages from each section and chapter of the 5610S, 6610S, 7610S, 7010, and 8010 Tractor Repair manual. Complete Repair part # 87032901.

The sections used through out all New Holland product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the 5610S, 6610S, 7610S, 7010, and 8010 Tractors.

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BOOK 1 - 87032902

Chapter 1 - General

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SPECIFICATIONS

Description	Unit	5610 S	6610 S	7610 S	7010	8010
Main Fuel Tank Capacity	liters	80	80	80	80	80
	gal	21.1	21.1	21.1	21.1	21.1
Auxiliary Fuel Tank Capacity	liters	50	50	50	50	50
	gal	13.2	13.2	13.2	13.2	13.2

TORQUE VALUES

Thermostart Plug	37 N·m	327 in.-lb.
Thermostart Union	10 N·m	89 in.-lb.
Thermostart Connector-to-Fuel Injection Pump	11 N·m	97 in.-lb.
Thermostart Pipe-to-Connector	10 N·m	89 in.-lb.
Fuel Filter Retaining Bolts	30 N·m	266 in.-lb.
Fuel Leak-Off Pipe-to-Injector Line	24 N·m	212 in.-lb.
Fuel Injector Nozzle Retaining Nut	48 N·m	35 ft.-lb.
Fuel Injector Retaining Bolts	22 N·m	195 in.-lb.
Fuel Injector Leak-Off Pipe Banjo Bolts	12 N·m	106 in.-lb.
Fuel Pipe Gland Nuts	32 N·m	283 in.-lb.
Fuel Tank Drain valve	07 N·m	62 in.-lb.
Fuel Injection Pump-to-Front Plate Retaining Bolts	24 N·m	212 in.-lb.
Fuel Pump Gear Retaining Nut	77 N·m	57 ft.-lb.
Fuel Separator retaining Bolts	30 N·m	266 in.-lb.

SPECIAL TOOLS

Tool	Tool Number	Other Tool Number
Kit, Fuel Injection Pump Timing	FNH08126	380000081
Socket, Nozzle	FNH08126	Nuday 8126
Adapter, Nozzle	FNH08124	Nuday 8124

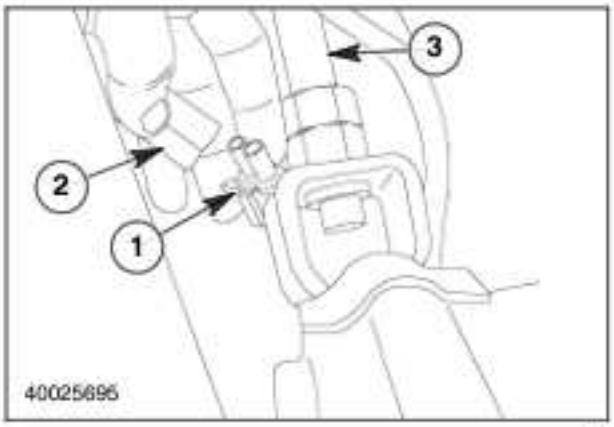
Fuel Injection Pump	5610S	6610S	7610S	7010	8010
8920A360W/361W			X		
8920A421W		X			
8920A431W	X				
8921A481W				X	X

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PROBLEM	POSSIBLE CAUSE	REMEDY
No power to rear wheels when power drive engaged (normal drive operative)	1. Scorred, burred or binding underdrive clutch piston	1. Replace piston
	2. Control valve spool jammed in direct drive position	2. Check control valve spool
	3. Worn or defective underdrive clutch plates	3. Replace clutch plates
No power to rear wheels when Dual Command is engaged in normal drive or power drive	1. Low Dual Command system pressure	1. Check system pressure
	2. Defective planetary gear set ring gear, planetary carrier, sun gear, shaft or main shaft splines	2. Check components and replace as necessary
	3. Main transmission or rear axle problem	3. Check and overhaul as necessary
	4. Clutch problem	4. Overhaul clutch
Engine stalls or lugs when shifting from power drive to normal drive	1. Scorred, burred or binding underdrive clutch piston	1. Replace piston
	2. Broken or defective underdrive clutch piston return springs	2. Replace springs
	3. Warped or defective underdrive clutch plates	3. Replace clutch plates
Engine stalls or lugs when shifting from normal drive to power drive	1. Scorred, burred or binding direct drive clutch piston	1. Replace piston
	2. Broken or defective direct drive clutch piston return springs	2. Replace springs
	3. Warped or defective direct drive clutch plates	3. Replace clutch plates
Lubrication pressure below specification	1. Weak or broken cooler/lubrication valve spring, or valve stuck open	1. Overhaul cooler/lubrication valve
	2. Blocked or restricted oil cooler	2. Replace oil cooler
Lubrication pressure above specification	1. Incorrect cooler/lubrication valve spring or valve stuck closed	1. Overhaul cooler/lubrication valve

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The rear harness (1) attaches to the left-hand fender harness (2) near the left brake control rod (3), Figure 34 to form connector C5, and to the right-hand fender harness to form connector C6 (not shown) in the same area.



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Left Fender Harness (Models without fender mounted headlamps) - Description and Location

The left fender harness connects to the rear harness at connector C5 and routes up the left fender to direct current to the tail/warning lamp. A spur lead from the left-hand tail/warning lamp directs power to the work lamp.

Right Fender Harness (Models without fender mounted headlamps) - Description and Location

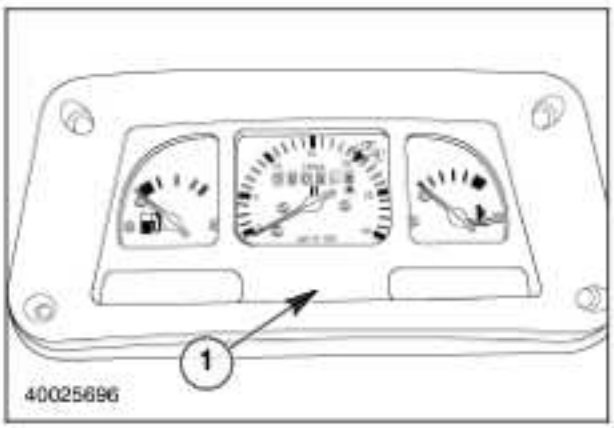
The right fender harness connects to the rear harness at connector C6 and routes along the edge of the lift cover and up the right fender to direct current to the tail/warning lamp.

ELECTRICAL COMPONENTS - DESCRIPTION, OPERATION AND OVERHAUL

INSTRUMENT PANEL

The instrument panel (1), Figure 35, provides gauges and warning lights for monitoring system performance, operational limits and malfunctions, which may occur when operating the tractor.

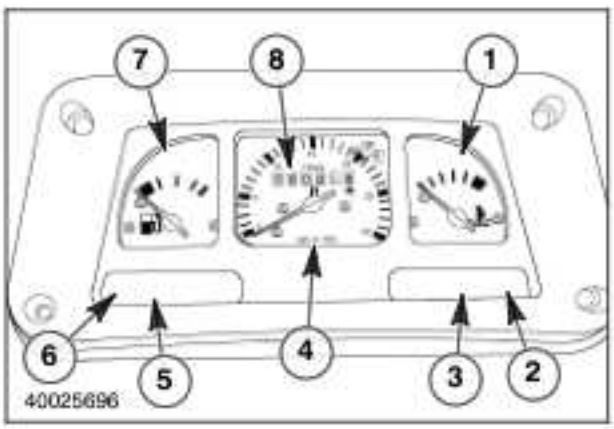
The electronic tachometer and the mechanical tachometer type instrument panel contain the same standard components, but differ in installation and in appearance. The instrument panel (regardless of type) will contain all, or most of the following components depending on model:



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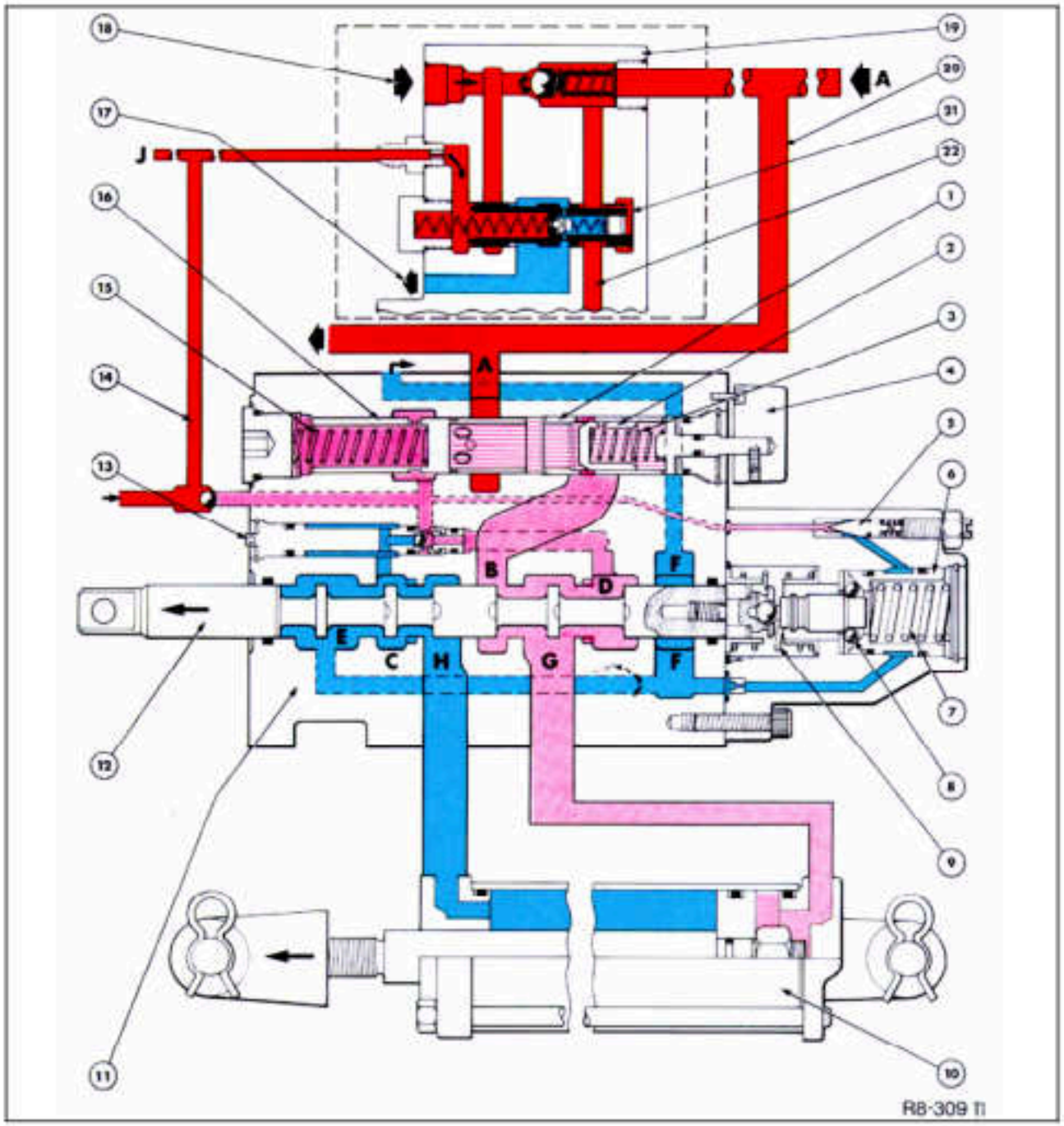
Refer to Figure 36.

- Coolant Temperature Gauge (1)
- Oil Pressure Warning Light (2)
- Fuel/Water Separator Warning Light (3)
- Tachometer (4)
- Air Cleaner Restriction Warning Light (5)
- Alternator Charging Warning Light (6)
- Fuel Gauge (7)
- Hour Meter (8)



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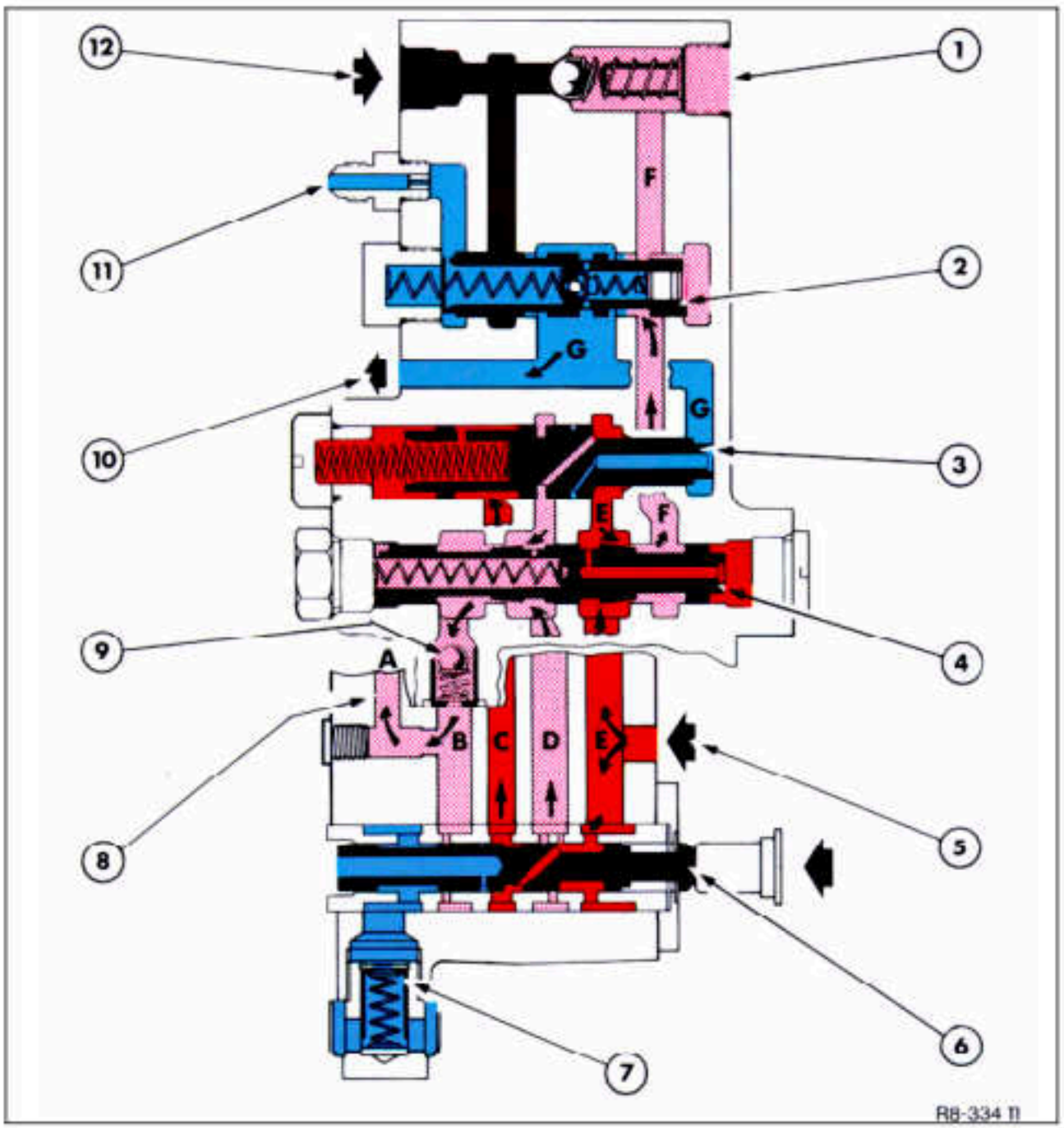
7

Double Remote Control Valve Operation

Pump Pressure Oil | Controlled Oil Flow | Reduced Oil Flow | Exhaust Oil

1. Flow Control Restrictor
2. Load Check Valve
3. Check Valve Spring
4. Flow Control Knob
5. Detent Regulating Valve
6. Detent Spool
7. Detent Plunger and Spring
8. Detent Balls
9. Centering Spring
10. External Cylinder
11. Valve Body
12. Control Valve Spool
13. Shuttle Check Valve
14. Load Sense Line (Pilot Line)
15. Flow Control Spring
16. Flow Control Spool
17. Return to Sump
18. Auxiliary Pump Supply
19. Hydraulic Priority Valve Assembly
20. Supply to Remote Valve
21. Combining (Sequencing) Valve
22. Main Pump Supply via Combining Valve

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Control Valve Oil Flow in Slow Raising Position
(Tractors with Fixed Displacement Hydraulic Pump)

Main Pump Pressure Oil | Reduced Pump Pressure Oil | Auxiliary Pump Oil | Exhaust Oil

1. To Remote Valves
2. Combining Valve (Sequencing) Valve
3. Unload Valve
4. Flow Control Valve
5. From Main Pump
6. Control Valve
7. Exhaust Valve
8. To Lift Cylinder
9. Check Valve
10. To Reservoir
11. Remote Valve Pilot Line (Load Sense Line)
12. From Auxiliary Pump

GALLERY A. To Lift Cylinder and Auxiliary Services Valve (where fitted)

GALLERY E. Main Pump Supply

GALLERY H. Auxiliary Pump Supply

GALLERY G. Return to Sump

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