

NEW HOLLAND

TM Series
TM120-TM190

REPAIR MANUAL

NEW HOLLAND

SERVICE

MidWestTech | New Holland TM120, TM130, TM140, TM155, TM175, TM190 Tractor Service Manual | Publication 87611238

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The following pages are the collation of the contents pages from each section and chapter of the TM Series Repair manual. Complete Repair part # 87611238.

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 TM Series Tractors.

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SECTION 00 - GENERAL

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Chapter 1 - General

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SECTION 10 - ENGINE

BOOK 1 - 87611239

Chapter 1 - Separating and Removing The Engine

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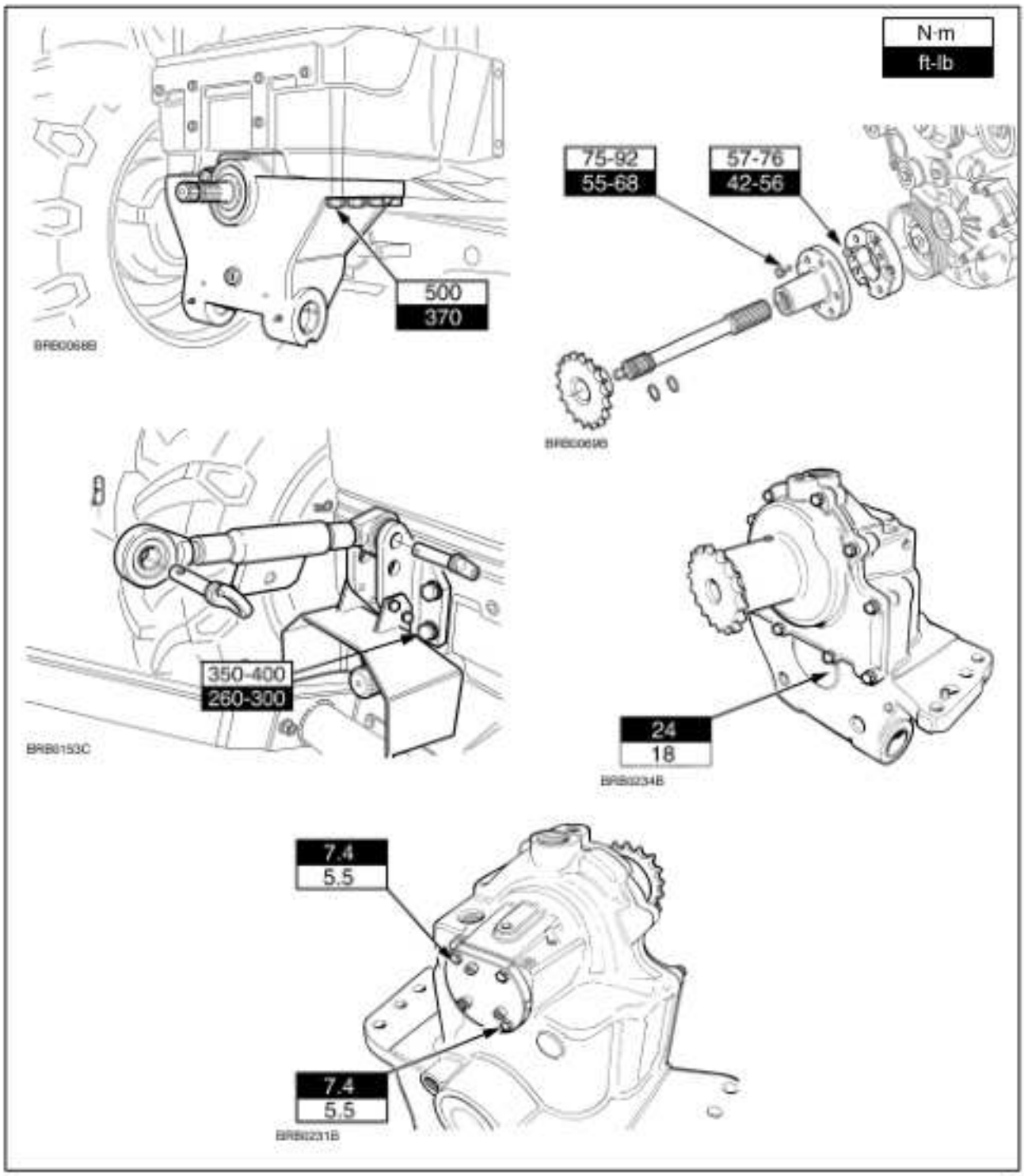
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SPECIFICATIONS

Lubrication Relief Valve Setting (Open)	3.5 bar	50 psi
PTO Circuit Operating Pressure	24 bar	348 psi
Clutch Friction Plate Thickness (new)	2.4 mm	0.0945 in
Clutch Disc Thickness-Steel (new)	1.5 mm	0.059 in

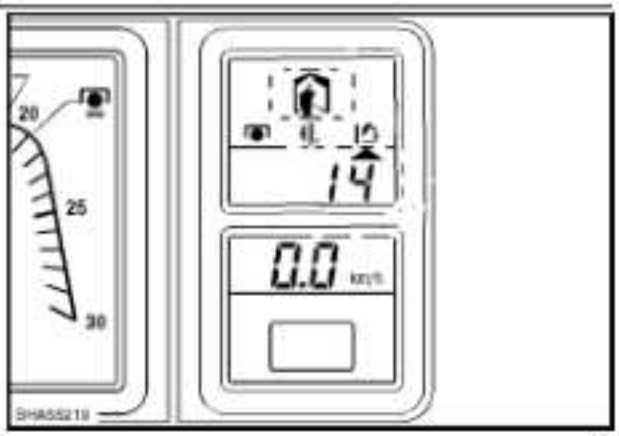
TIGHTENING TORQUES



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Electronic Draft Control error codes when retrieved will flash on the instrument panel.



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The self diagnostic capability is generally limited to diagnosis of the electrical and electronic circuitry and related components, however, there are some codes, which can be generated if pressure switch circuits are not closed because of an actual lack of hydraulic pressure.

Any malfunction of the mechanical and hydraulic components must be diagnosed using conventional techniques, performance characteristics and tooling, such as pressure testing equipment.

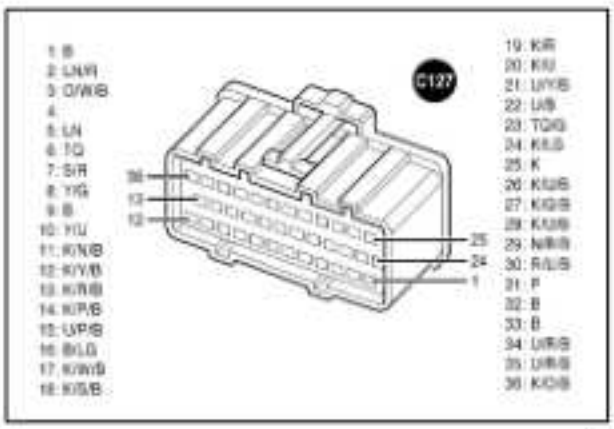
Trouble-shooting and fault finding should always be carried out in a logical and planned sequence. Many apparent faults associated with electronic components are often hastily diagnosed and result in the replacement of expensive components. An extra few minutes confirming the apparent fault will result in a more positive and cost effective repair.

Prior to detailed fault finding, items like the Earth connections and battery should be cleaned and tested to ensure that they are functioning correctly.

Processors are often blamed for any malfunction but the real truth is that this item is usually sound and that the fault is due to poor contacts in the associated connectors.

Each connector illustrated and identified in the wiring diagrams in the electrical section and referred to in the following fault finding procedure, has the same identification reference. For example, the main processor connectors are referred to as Connectors C127 and C128 in the illustration and also referred to as C127 and C128 in the fault finding procedure. Often in the fault finding flow chart the connector and pin are abbreviated and will read, for example, C127-10. The C127 refers to the connector and the 10 to the pin number.

The electrical section contains complete wiring diagrams, connector identifications and a list of circuit numbers as used within the circuit diagrams.



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175 AND 190 MODELS - DIGITAL INSTRUMENT CLUSTER FAULT CODES

The Digital Instrument Cluster (DIC) features an integral fault diagnosis system which displays error codes on the LCD as shown in the following table.

These error codes appear when any one of the listed errors occurs. The alarm sounds continuously for a critical alarm and for 5 seconds with a non critical alarm.

SENSOR CONDITION	EIC DISPLAY		ALARM
	Less than 500 rpm Fault Code No.	More than 500 rpm	
Engine oil pressure sender short or open circuit	1	STOP	Critical
Engine oil pressure sender short to a +Ve	2	STOP	Critical
Fuel tank level sender short to ground	3		Non Critical
Fuel tank level sender open circuit or short to a +Ve	4		Non Critical
Output speed sensor short to ground	5	MPH	Non Critical
Output speed sensor open circuit	6	MPH	Non Critical
Coolant temperature sender short circuit	7	STOP	Non Critical
Electronic draft control error serial link failure	8		
Transmission error serial link failure	9		
Memory retention error of battery calibration constant	10		
Slip alarm, slip constant, width and service hours check	11	MPH	Non Critical
Coolant temperature sender open circuit or shorted to a +Ve	12	STOP	Critical
Engine shut down output short to a +Ve	13		

Non DIC Faults - only displayed in the Diagnostic Memory.

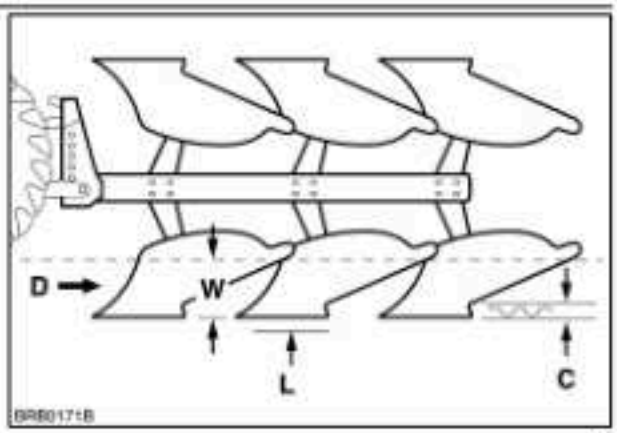
Read Your Manual (RYM)

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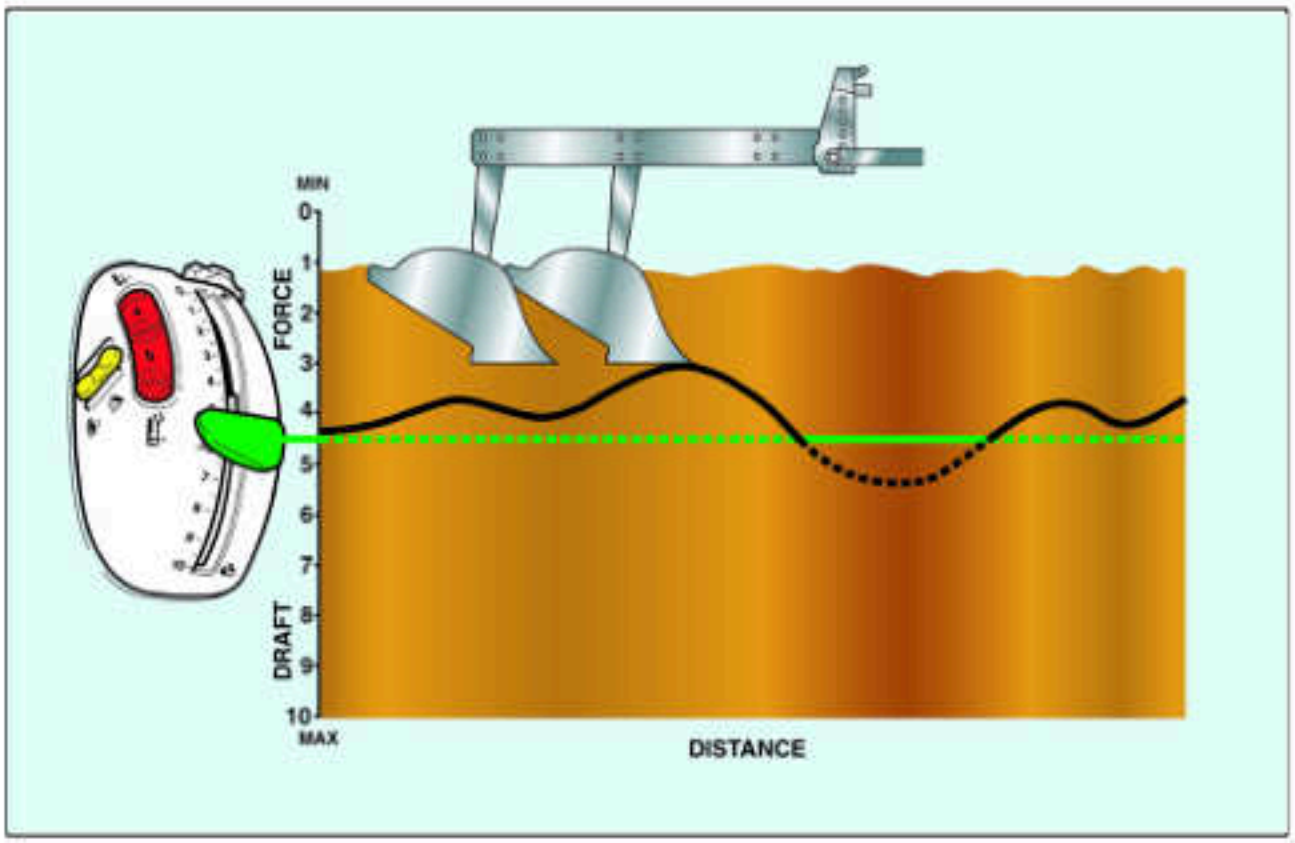
OPERATION OF DRAFT CONTROL

In draft control the working position of the lift arms is affected by the lift arm position control lever, draft loading control, draft sensitivity and slip limit control. All these controls interact with each other to achieve the desired operation of the hydraulic lift.

- **D** Draft Load on Implement
- **W** Working Depth (Set by Draft Loading Control)
- **L** Lower Limit (Set By Lift Arm Position Control Lever)
- **C** Correction Band (Set by Sensitivity Control)



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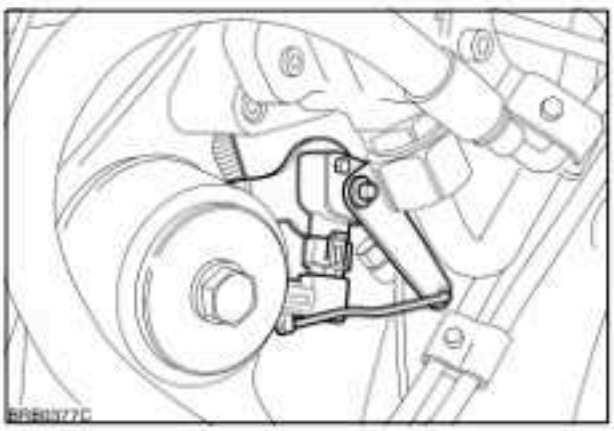


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The lower limit working depth of an implement in the soil is controlled by the lift arm position control lever.

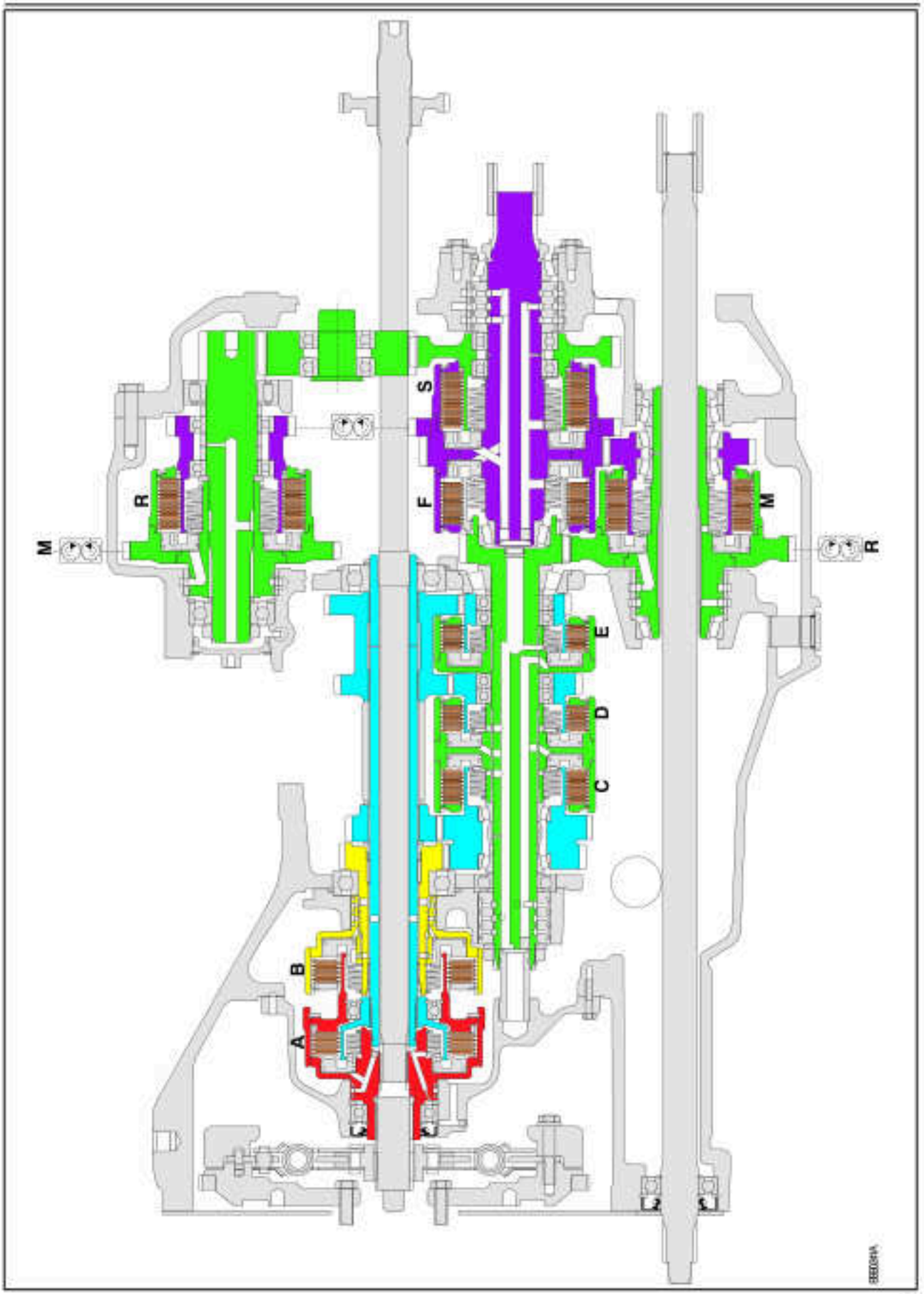
Irrespective of any draft loading applied to the implement the maximum depth of the implement will never exceed this setting.

The depth of the implement is sensed using the lift arm position control potentiometer which sends a signal to the microprocessor to turn off power to the lower solenoid of the hydraulic control valve when maximum depth has been reached.

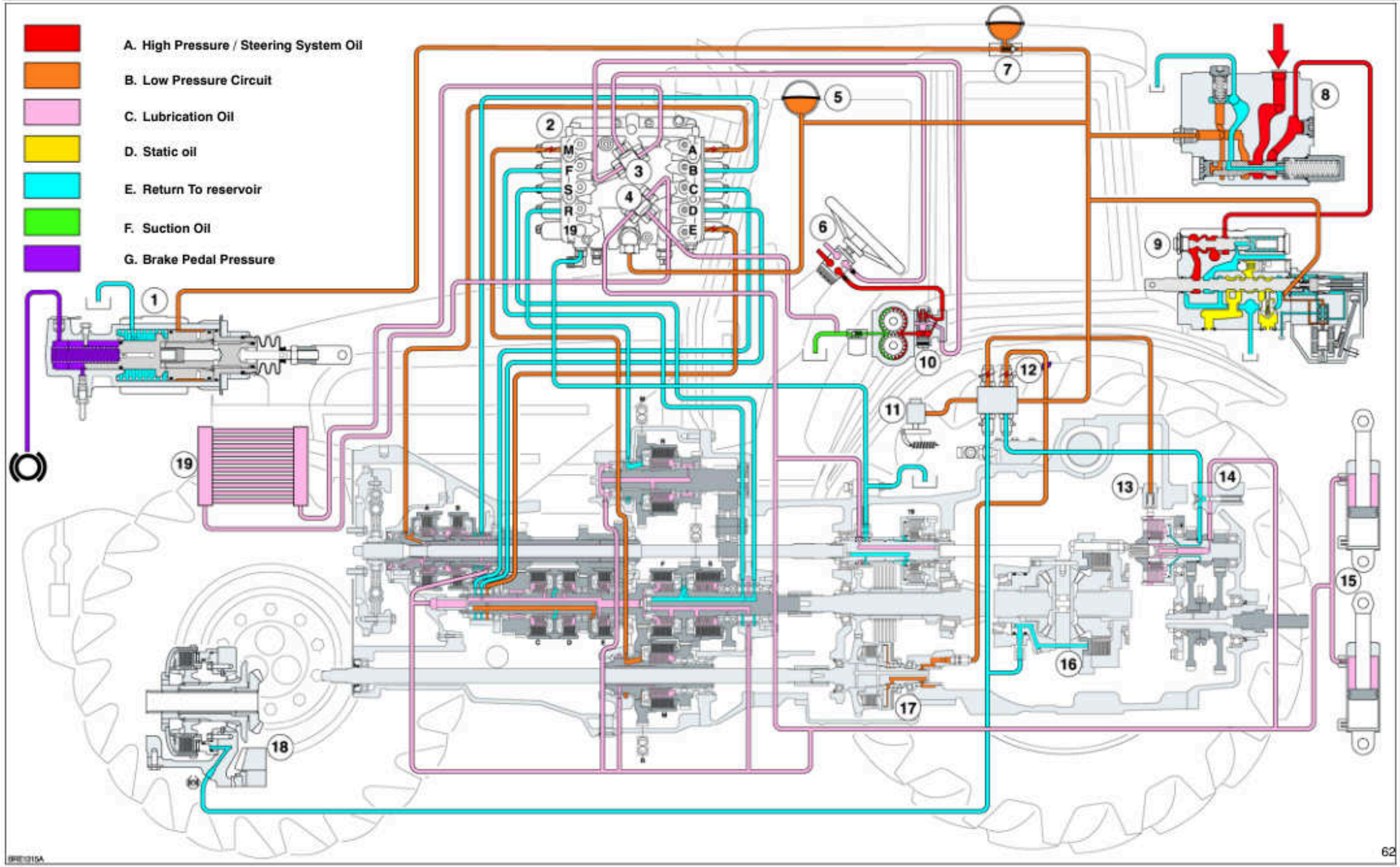


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Low Pressure Hydraulic Circuit - 175-190 Model Tractors

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