MXM120
MXM130
MXM140
MXM155
MXM175
MXM190

Tractors

SERVICE MANUAL

87613647

CASE IH AGRICULTURE

MidWestTech | Case MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 Tractor Service Manual | Publication 87613647

Order the manual at mid-west-tech.com >

MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 REPAIR MANUAL COMPLETE CONTENTS

SECTION 00 - GENERAL 2
SECTION 10 - ENGINE 3
SECTION 18 - CLUTCH 11
SECTION 21 - TRANSMISSION SYSTEMS 12
SECTION 23 - DRIVE LINES 21
SECTION 25 - FRONT AXLE 23
SECTION 27 - MECHANICAL REAR WHEEL DRIVE 26
SECTION 31 - POWER TAKE-OFF 30
SECTION 33 - BRAKES 33
SECTION 35 - HYDRAULIC SYSTEM 37
SECTION 41 - STEERING 56
SECTION 44 - FRONT AXLE AND WHEELS 57
SECTION 50 - AUXILIARY UNITS 58
SECTION 55 - ELECTRICAL SYSTEM 60
SECTION 90 - CAB 108

The following pages are the collation of the contents pages from each section and chapter of the MXM Series Repair manual. Complete Repair part # 87613647.

The sections used through out all Case IH 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 MXM Series Tractors.

© 2006 CNH America LLC
Printed in U.S.A.

87613659 11/06
Replaces 87020450

MidWestTech | Case MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 Tractor S... Order the manual at mid-west-tech.com >

SECTION 00 - GENERAL

BOOK 1 - 87613648

Chapter 1 - General

CONTENTS

Section	Description	Page
	General Instructions	3
	Important Notice	3
	Shimming	3
	Rotating Shaft Seals	3
	O Rings	3
	Sealers	3
	Bearings	3
	Spring Pins	3
	Precautionary Notice	4
	Equipment Notice	4
	Spare Parts Notice	4
	General Notices	4
	Health and Safety	5
	Health and Safety Precautions	5
	Precautionary Statements	14
	Safety	15
	The Tractor	15
	Driving the Tractor	15
	Operating the Tractor	15
	Operating the PTO	16
	Servicing the Tractor	16
	Diesel Fuel	17
	ROPS	17
	Ecology and the Environment	18
	Precautions	18
	Minimum Hardware Tightening Torques	19
	Federal Emissions Warranty	21
	California Emission Control Warranty Statement	22
	Lubricants and Coolants	24
	Sulphur in Fuel	24
	Biodegradable Transmission, Drive Axle, Hub, and Hydraulic System Oil	24

MidWestTech | Case MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 Tractor S... Order the manual at mid-west-tech.com >

SECTION 10 - ENGINE

BOOK 1 - 87613648

Chapter 1 - Separating and Removing The Engine

CONTENTS

Section	Description	Page
	Tightening Torques	2
	Special Tools	3
	Separating and Removing the Engine	4
	Front Axle and Support	4
	Separating Front Axle and Support from Engine	4
	Installation	12
	Engine and Front Support	14
	Separating Engine and Front Support from Transmission	14
	Installation	20
	Engine	21
	Removal	21
	Installation	24

MidWestTech | Case MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 Tractor S... Order the manual at mid-west-tech.com >

SPECIAL TOOLS

	PART No
Pressure Gauge 0-6.6 bar (0-100 psi)	380000567
Pressure Gauge 0-414 bar (0-6000 psi)	380000566
Adaptor Charge Pressure Test	380000572
Hydraulic Pressure Test Kit	380000240
Tee Adaptor $^{1}/_{4}$ ORSF (F) x $^{1}/_{4}$ ORFS (F) x $^{7}/_{16}$ UNF (F)	380000573
Tee Adaptor $^{3}/_{8}$ ORSF (F) x 3/8 ORFS (F) x $^{7}/_{16}$ UNF (F)	380000570
Adaptor m10x1 (M) x $^{7}/_{16}$ UNF (F)	380000493
Adaptor m10x1 (M) x $^{7}/_{16}$ JIC (M)	380000494
Cap $^{1}/_{4}$ ORFS	380000574
Quick Release coupler (F)	380000543
Quick Release Adaptor x $^{7}/_{16}$ UNF (M)	380000492
Alignment Dowel	Local Manufacture
Flowmeter 0-200 ltrs/min (gal/min)	Procure Locally
Pressure Gauge 0-42 bar (0-600 psi)	380000552
Remote Valve Coupling	380000554
Adaptor	380000576
Test Hose	380000545
Pressure Gauge 0-250 bar (0-3600 psi)	380000553

SEALANT

Flexible Gasket Sealant	Loctite 574

MidWestTech | Case MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 Tractor S... Order the manual at mid-west-tech.com >

ERROR CODE 31 - CHASSIS HARNESS DISCONNECTED

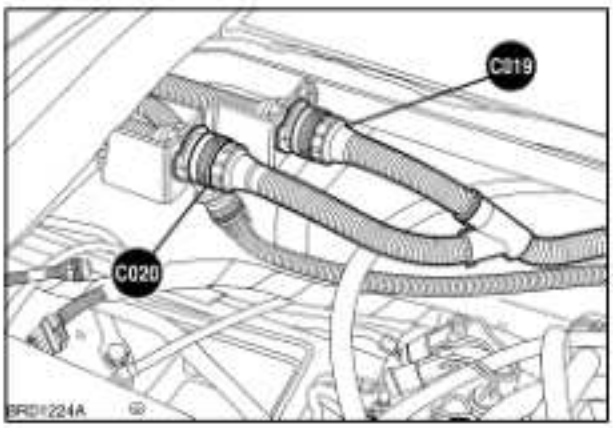
Possible failure modes:

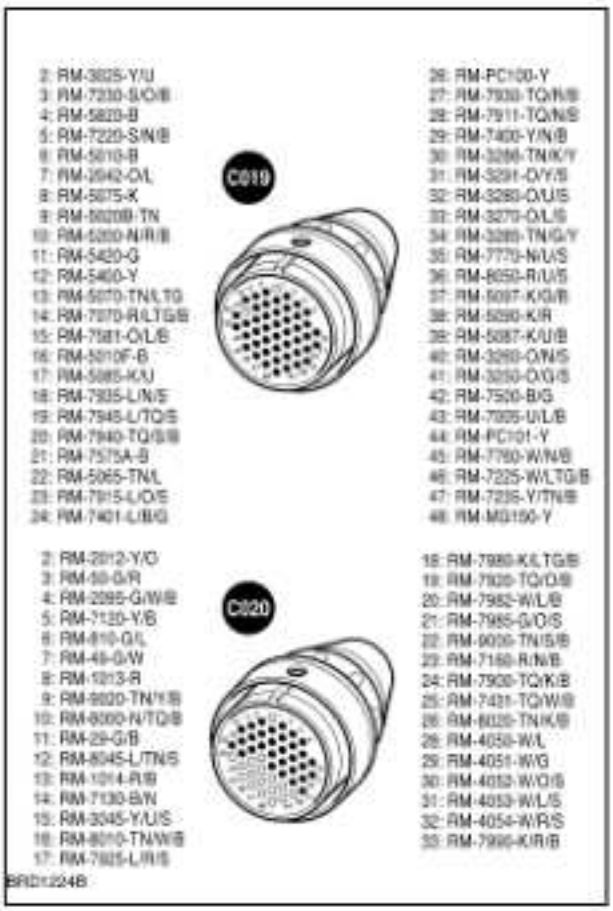
1. Faulty connector
2. Faulty harness
3. Faulty secondary controller (CFPS)

Solution:

NOTE: *When the cause of the error code has been rectified, clear the error code and test the system for normal operation.*

1. Check the chassis harness connectors **C019**, **C020** and **C317**.
   A. Ensure the chassis harness connector is connected, not damaged, the pins are in the correct position and the fit is tight. Repair or replace as required.
   B. If the chassis harness connector is okay, continue to step 2.
2. Visually check the chassis harness for any damage.
   A. If the harness is damaged, repair or replace as required.
   B. If harness okay, continue to step 3.
3. Check for other error codes.
   A. Continue to test for error code 18, but do not replace the secondary controller (CFPS) at this stage.
   B. If error code 31 is still indicated, continue to test for error codes 27 and 28.





Order the manual at mid-west-tech.com >

Rear Main (Transmission) Harness Connectors

1. **C019** Extension Harnesss Connector 1 (Page 159, Figure 40)
2. **C020** Extension Harnesss Connector 2 (Page 159, Figure 40)
3. **C022** Fuel Tank Sender (Page 159, Figure 41)
4. **C023** Transmission Oil Temperature Sender (Page 160, Figure 46)
5. **C033** PTO Brake Solenoid (Page 160, Figure 47)
6. **C034** Four Wheel Solenoid (Page 160, Figure 48)
7. **C035** Four Wheel Drive Pressure Switch (Page 160, Figure 48)
8. **C036** Transmission Oil Pressure Switch (Page 160, Figure 48)
9. **C041** PTO Solenoid (Page 160, Figure 47)
10. **C042** Differential Lock Solenoid (Page 160, Figure 47)
11. **C043** Differntial Lock Pressure Switch (Page 160, Figure 49)
12. **C044** Ground Speed PTO Engaged Switch (Page 161, Figure 54)
13. **C045** Hydraulic Pump Connector (Page 161, Figure 54)
14. **C046** Axle Speed Senor (Page 161, Figure 54)
15. **C047** Left-Hand Draft Sensing Pin (Page 161, Figure 55)
16. **C048** Right-Hand Draft Sensing Pin (Page 161, Figure 55)
17. **C049** Diverter Valve Connector (Page 161, Figure 56)
18. **C050** Trailer Brake Connector (Page 161, Figure 57)
19. **C052** Rockshaft Potentiometer (Page 162, Figure 62)
20. **C053** Remote Valve Solenoid (Page 161, Figure 57)
21. **C054** PTO Speed Sensor (Page 162, Figure 63)
22. **C055** Trailer Socket (Page 161, Figure 56)
23. **C156** Reverse Synchro Solenoid (Page 162, Figure 64)
24. **C157** Forward Synchro Solenoid (Page 162, Figure 64)
25. **C158** Synchro Position Potentiometer (Page 162, Figure 65)
26. **C159** Clutch Pressure Switch A (Page 160, Figure 46)
27. **C160** Clutch Pressure Switch B (Page 160, Figure 46)
28. **C161** Clutch A (Low) (Page 160, Figure 46)
29. **C162** Clutch B (High) (Page 162, Figure 64)
30. **C163** Dump Solenoid (Page 163, Figure 67)
31. **C164** Gear Switch1 (Page 162, Figure 65)
32. **C165** Gear Switch 2 (Page 163, Figure 67)
33. **C166** Range Switch 1 (Page 162, Figure 65)
34. **C167** Range Switch 2 (Page 163, Figure 67)
35. **C217** EDC Raise Solenoid (Page 161, Figure 56)
36. **C218** EDC Lower Solenoid (Page 162, Figure 63)

MidWestTech | Case MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 Tractor S... Order the manual at mid-west-tech.com >

Section 55
Electrical System

Chapter 13 - Calibration Procedures

Chapter 14 - Electrical Introduction Semi Powershift Models
From Serial No. ACM265009

Chapter 14A - Wiring Diagrams Semi Powershift Models
From Serial No. ACM265009

Chapter 14B - Electrical Harnesses Semi Powershift Models
From Serial No. ACM265009 w/Processor Reduction Change

Chapter 14C - Diagnostic "H" Routines Semi Powershift Models
From Serial No. ACM265009

Chapter 14D - Fault Code Descriptions Semi Powershift Models
From Serial No. ACM265009

Section 90
Cab

MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 Tractors

Repair Manual

87613658
Replaces 87020449

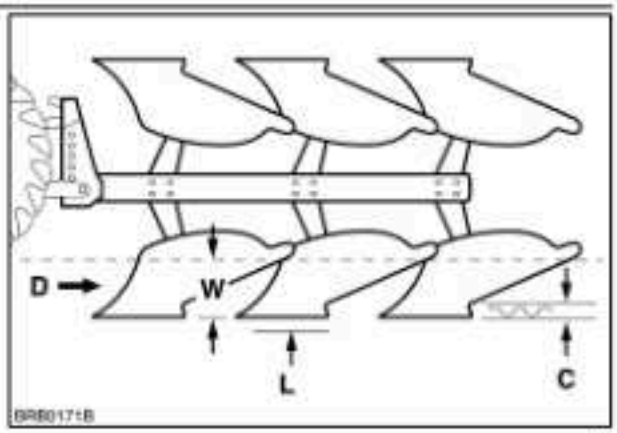
CASE IH

MidWestTech | Case MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 Tractor S... Order the manual at mid-west-tech.com >

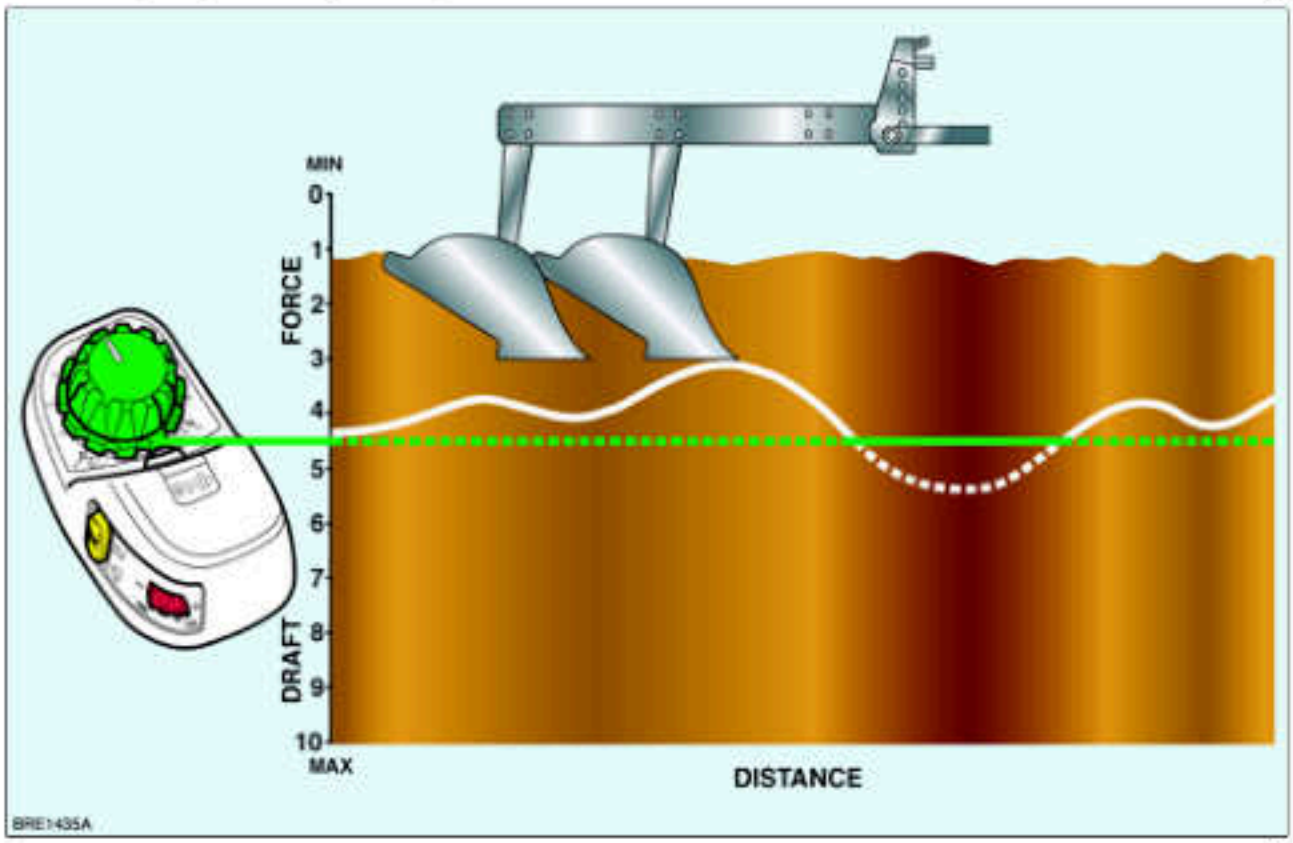
OPERATION OF HITCH CONTROL

In draft control the working position of the lift arms is affected by the lift arm position control knob, 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 knob)
- **C** Correction Band (Set by Sensitivity Control)



25

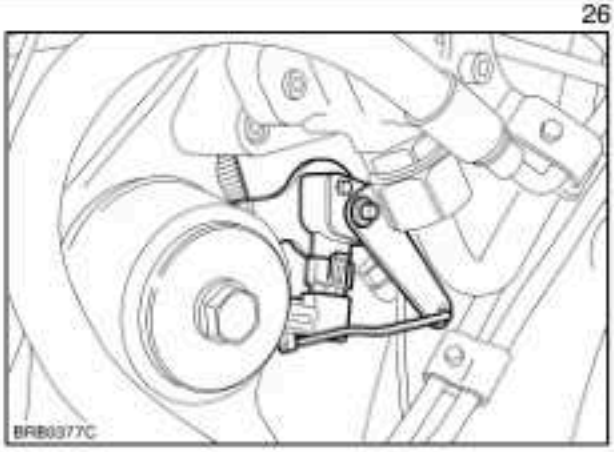


26

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

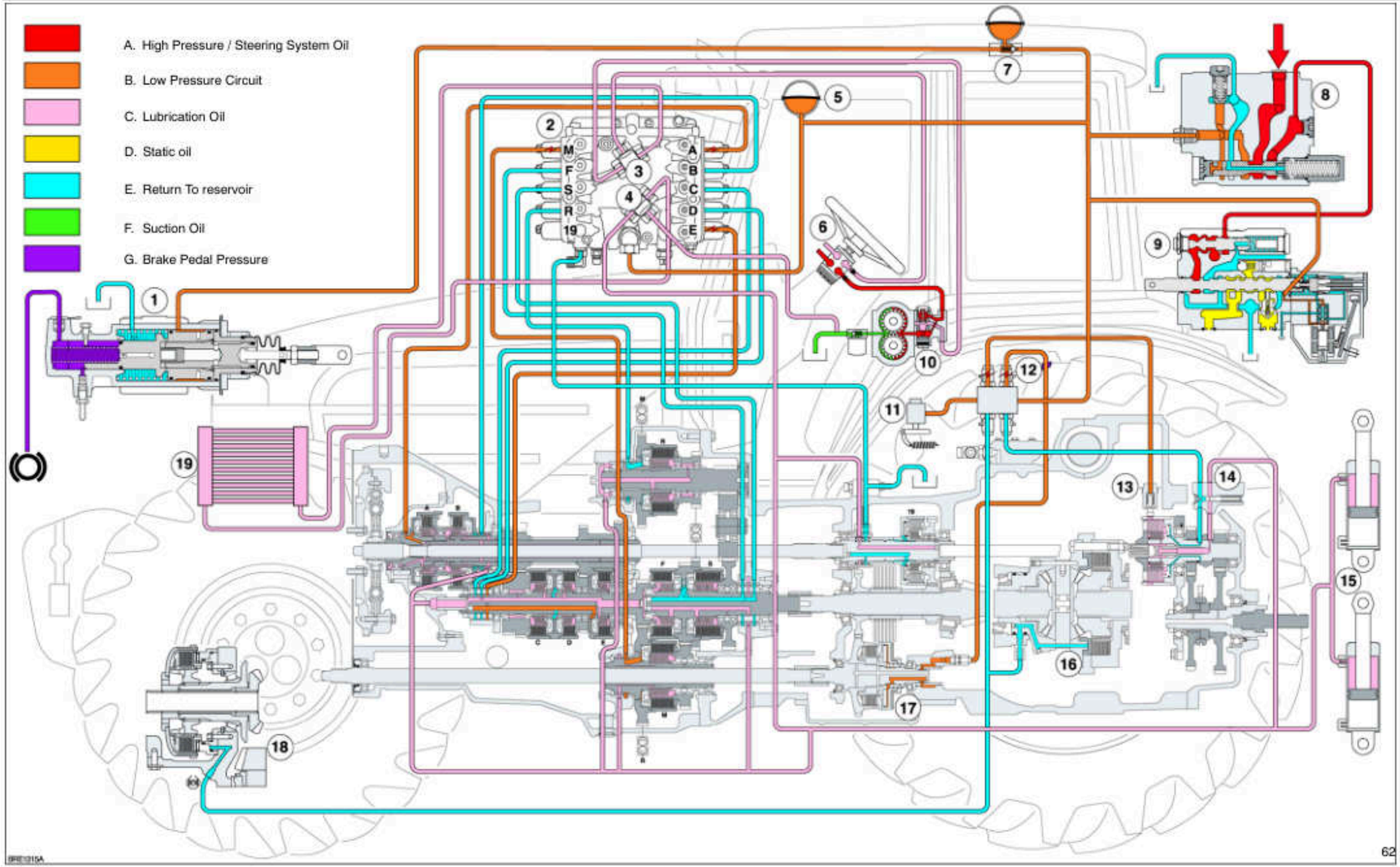
Irrespective of any draft loading applied to the implement the maximum depth of the implement will never exceed this setting.

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.



27

MidWestTech | Case MXM120, MXM130, MXM140, MXM155, MXM175, MXM190 Tractor S... Order the manual at mid-west-tech.com >



Low Pressure Hydraulic Circuit - 175-190 Model Tractors

Order the manual at mid-west-tech.com >