

MacDon®

M-Series Self-Propelled Windrower Autosteer Installation Instructions

Contents

Installation Instructions.....	3
Parts List	12

MacDon M-Series Windrower
AUTOSTEER INSTALLATION INSTRUCTIONS

MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS

Before installing the kit, check the parts list at the back of this document to ensure that you have all required parts.

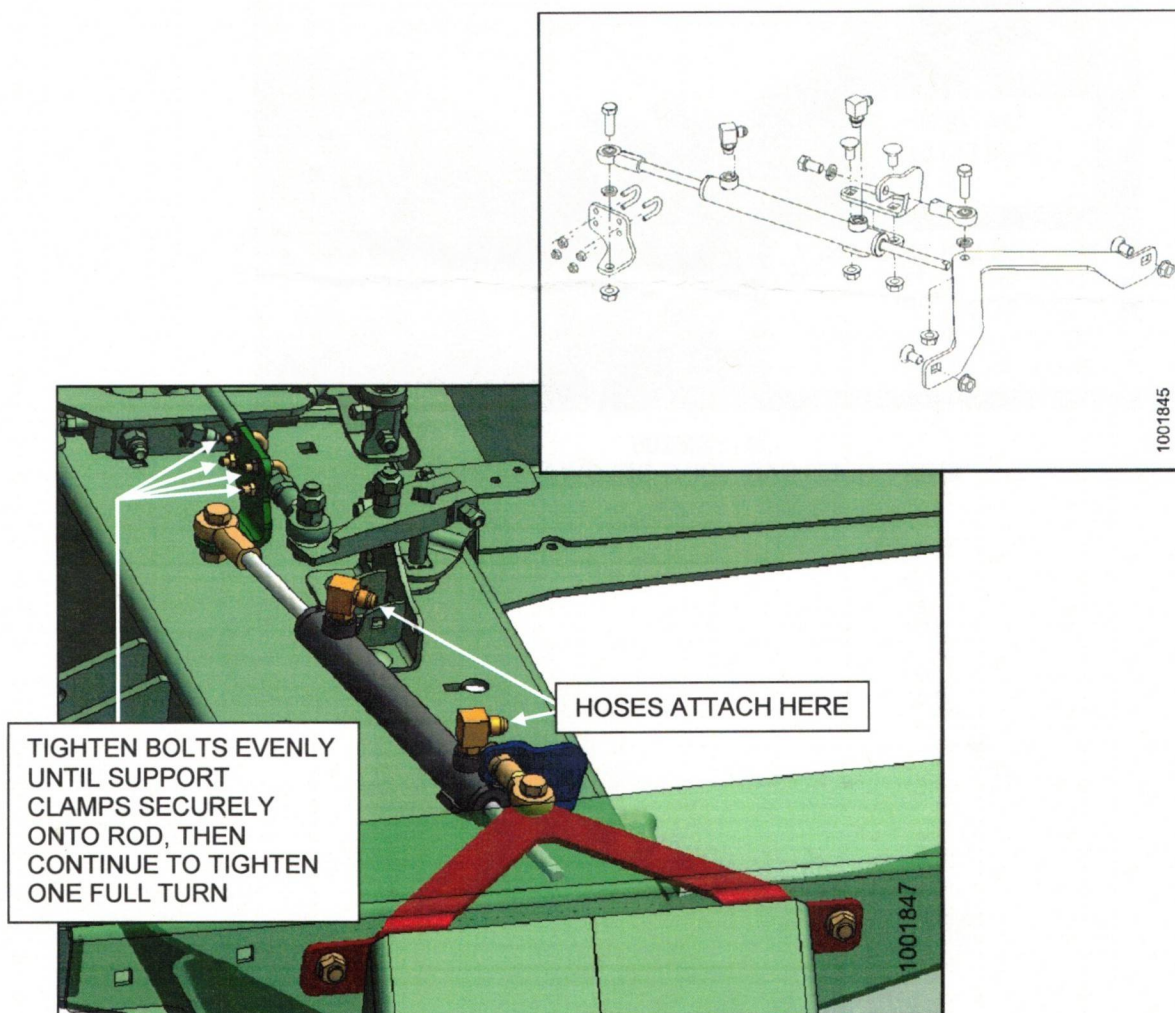
Installation Instructions

NOTE: Assemble all hydraulic lines loosely and confirm hose routing is satisfactory before tightening. All components must be tightened to specified torque.

IMPORTANT: To prevent contamination and undue wear or damage, clean all components thoroughly before attempting any of the following steps and work in a clean area with a concrete floor. Do not remove protective plugs/caps until immediately before line is to be connected. Collect and responsibly dispose of spilled oil when disassembling components.

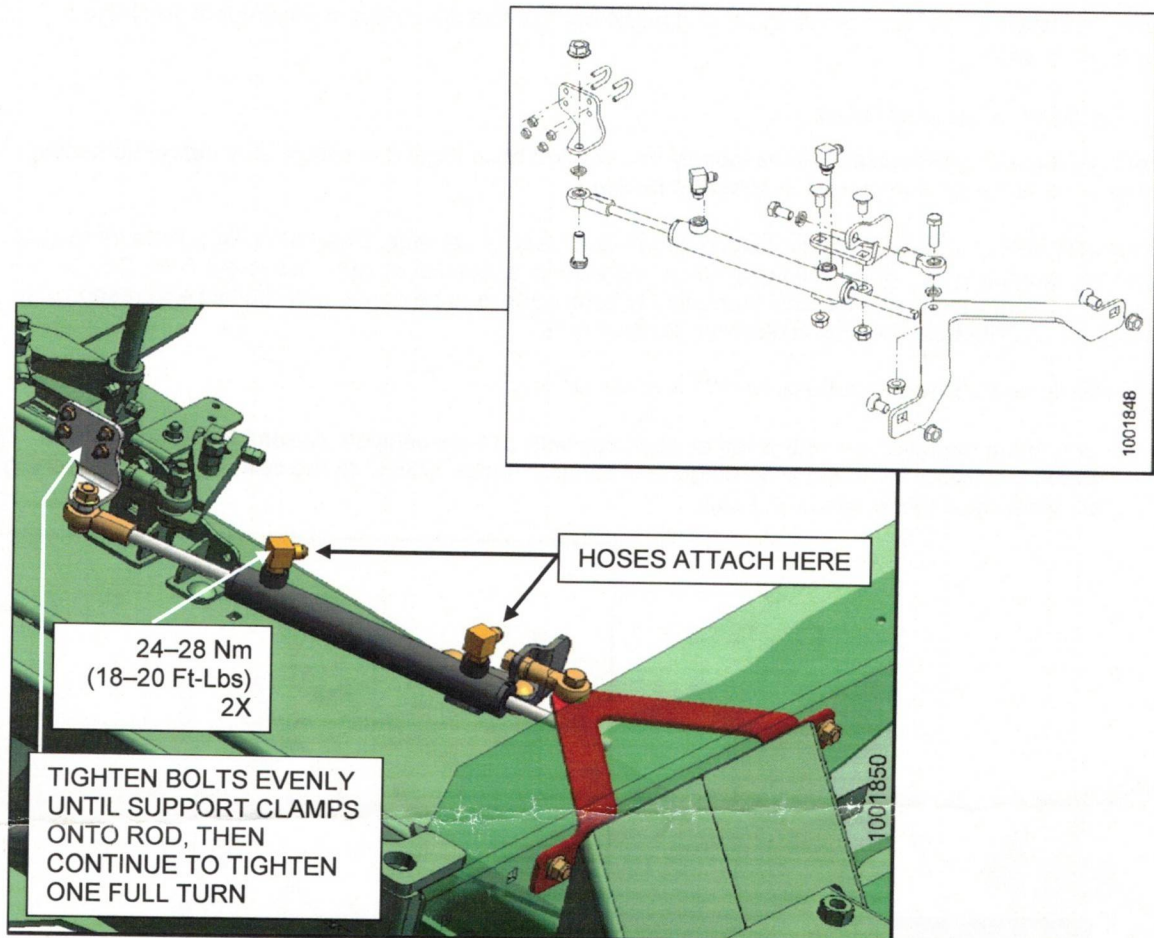
To install the Hydraulic Autosteer kit, follow these steps:

1. Determine model of unit and whether equipped with cab-suspension. Assemble the appropriate steering cylinder mounting accordingly and connect hoses 173547 to the cylinder prior to attaching to the windrower frame, below the cab.



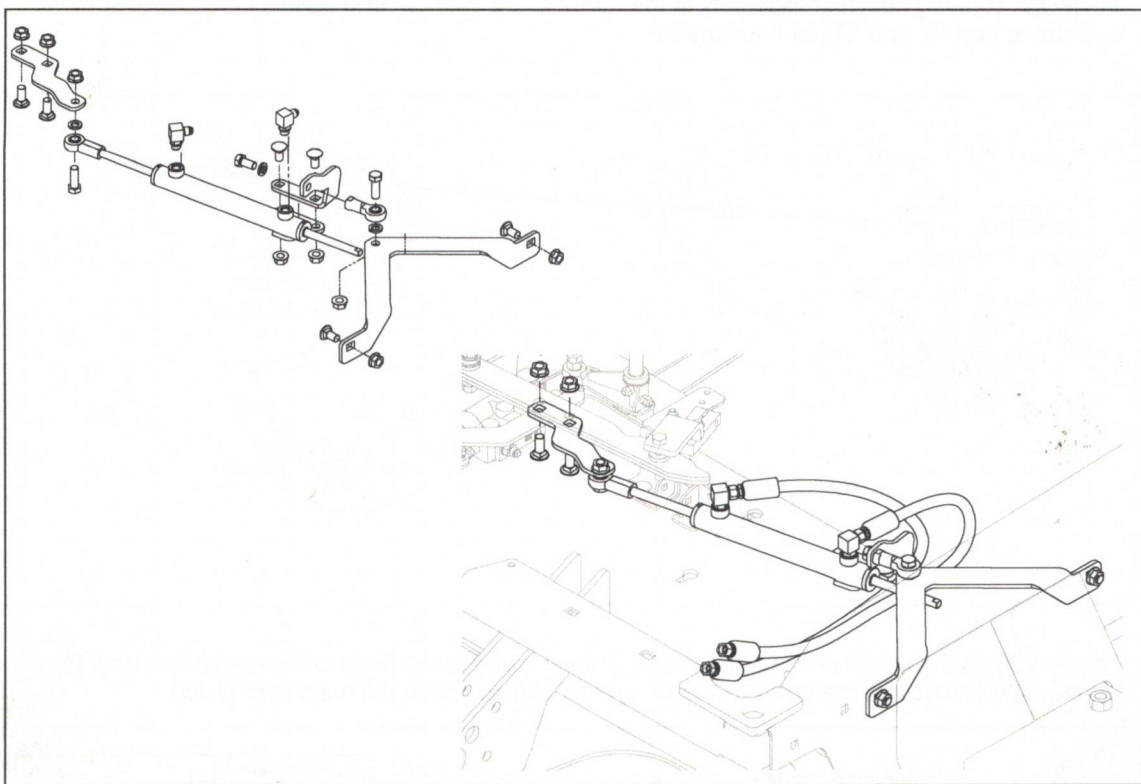
2010-11 M150
NON-SUSPENDED CAB: JOINT ABOVE BRACKET

MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS

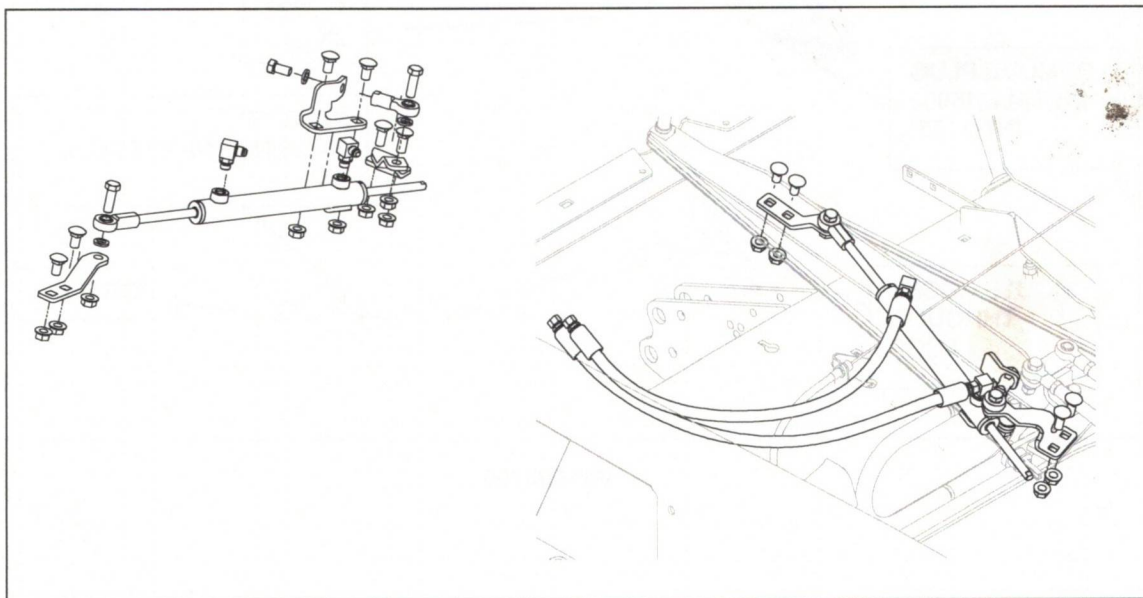


M155/M205
SUSPENDED CAB: JOINT BELOW BRACKET

MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS



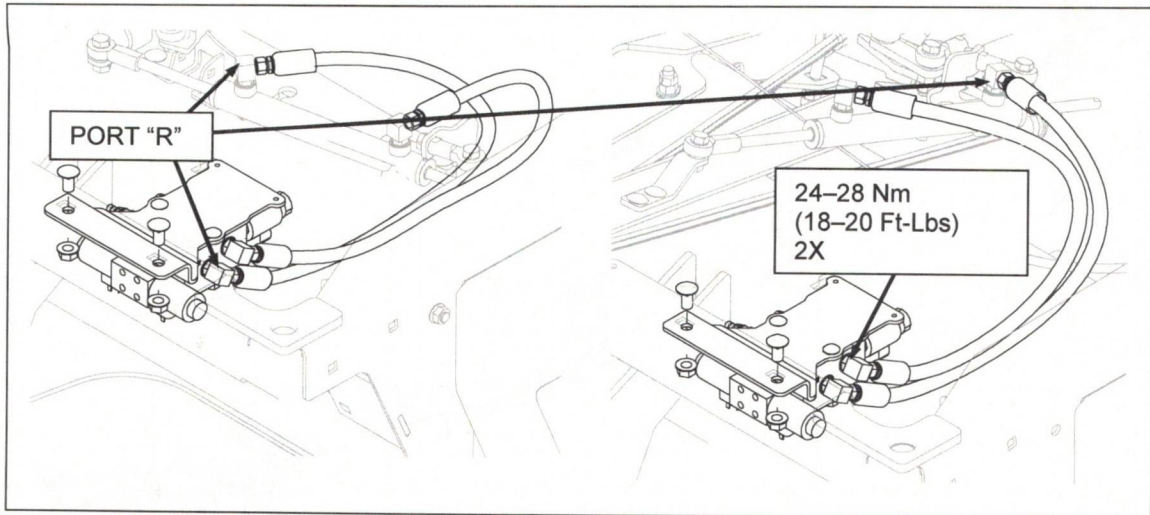
PRE-2010 M150/M200



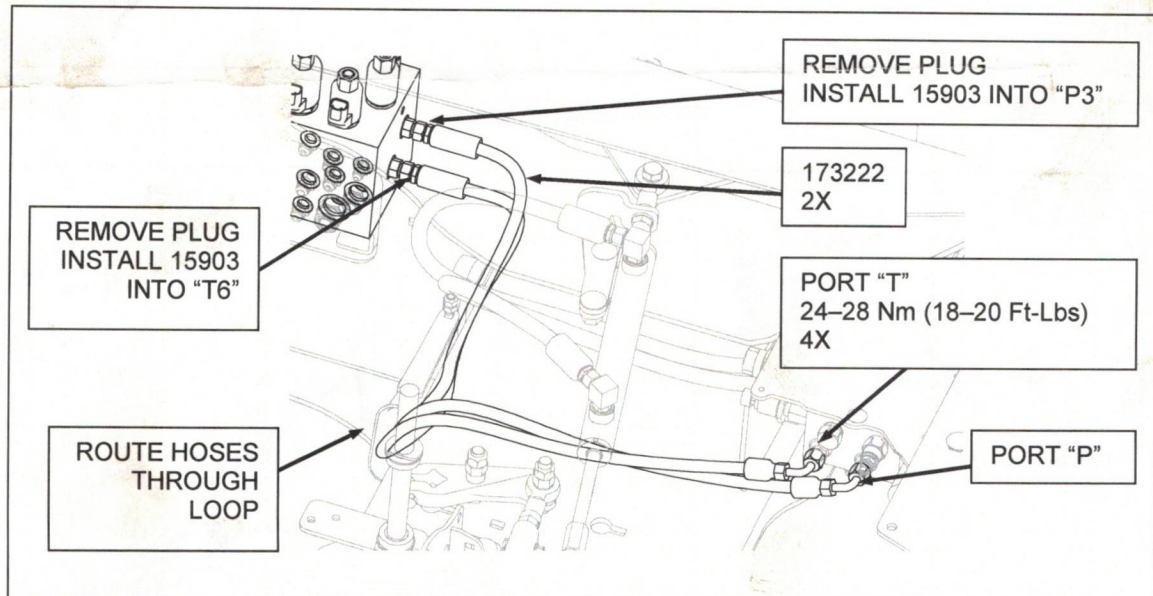
M100/M105

MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS

2. Install the steering manifold assembly to the frame cross member and connect the hoses from the cylinder to port "L" and "R" on the manifold

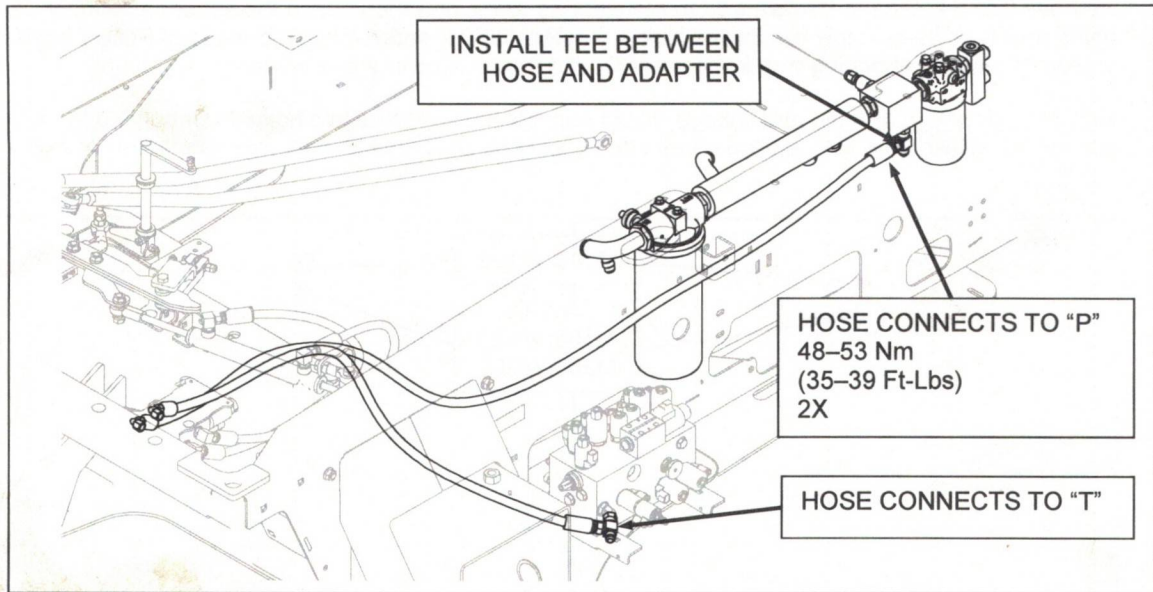


3. Depending on the model connect the supply pressure and return lines to the manifold, install the appropriate fittings into the unit's hydraulic system and complete the hose connection.

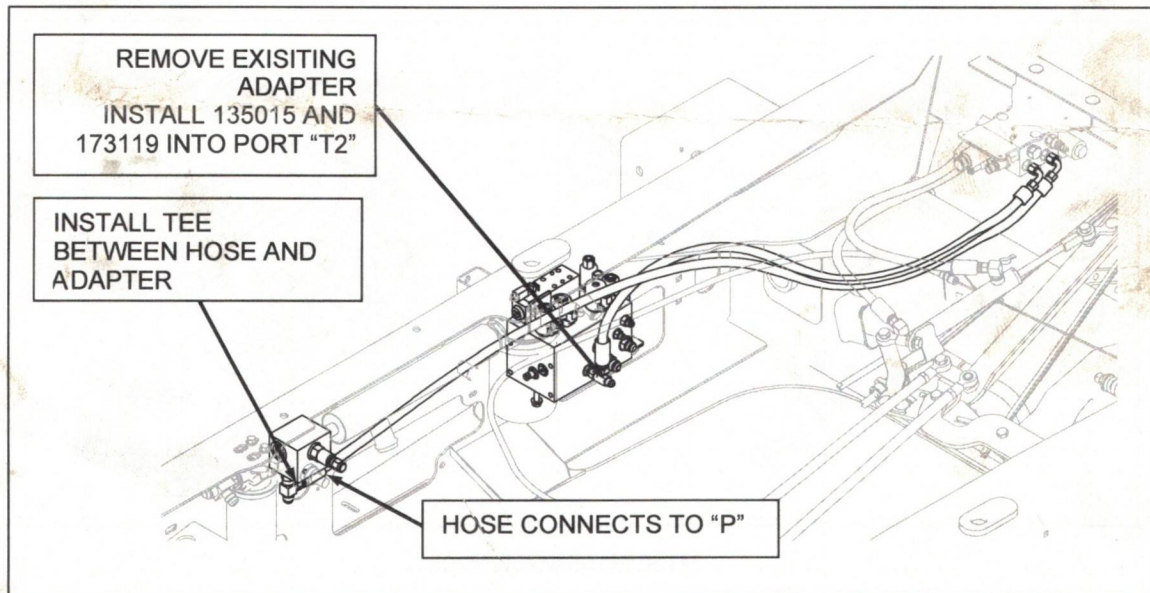


M155/M205

MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS



M150/M200

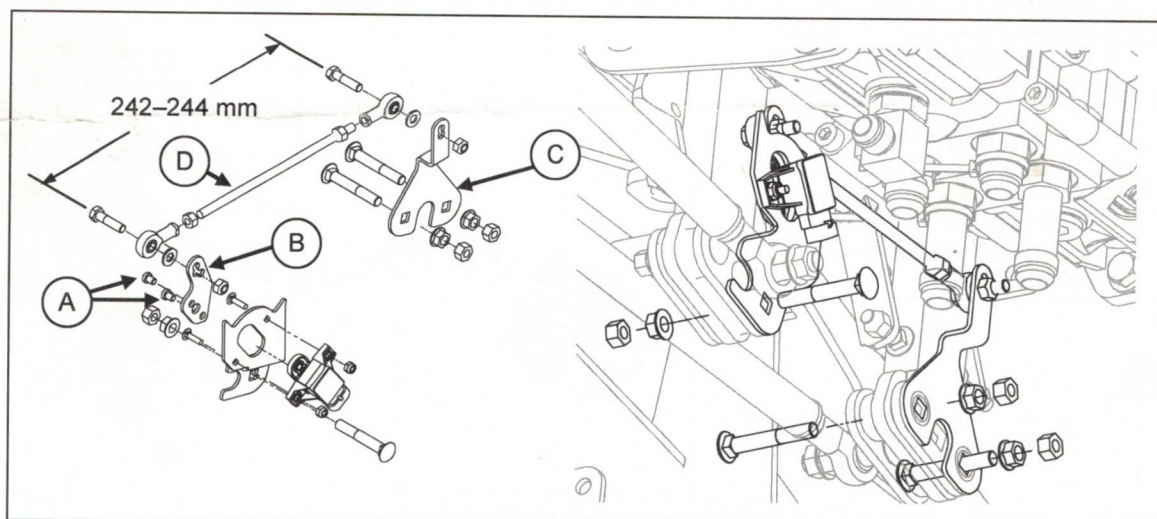
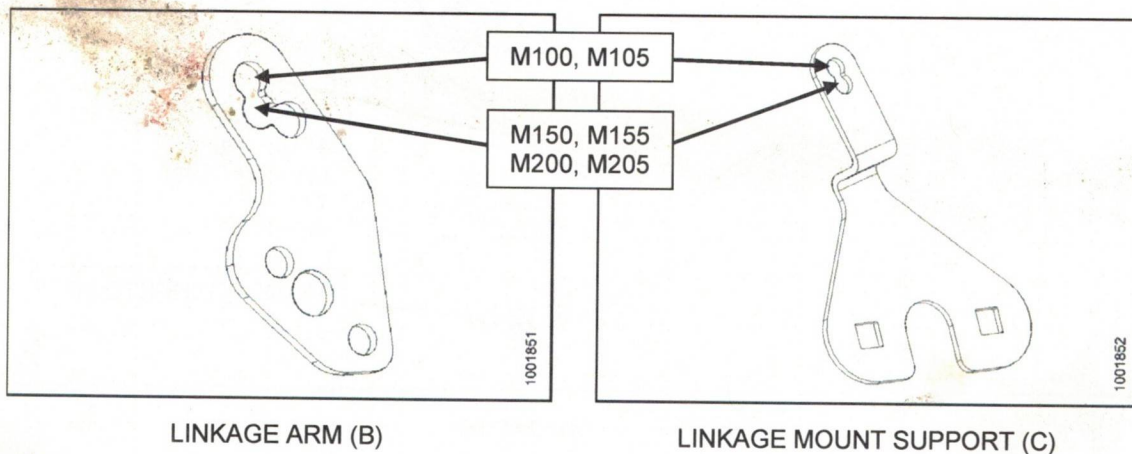


M100/M105

MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS

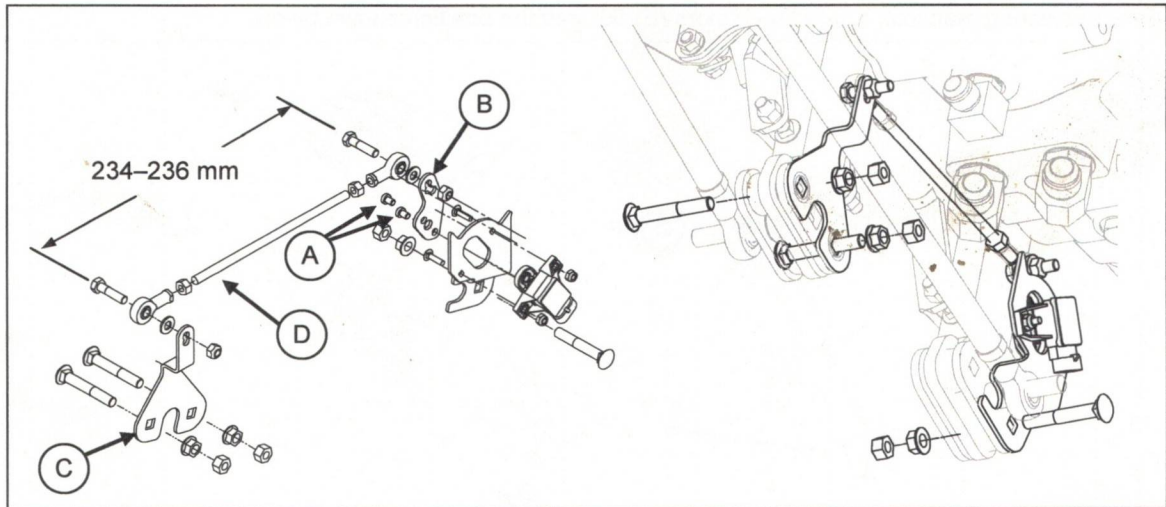
4. Remove and discard the hardware from the steering arms, and then attach the sensor assembly using new hardware. Apply red thread locker (Loctite® 262 or equivalent) to threads of Philips head screws (A) before attaching to linkage arm (B), and then torque to 2.0–3.0 Nm.

NOTE: The linkage arm (B) and linkage mount support (C) have multiple holes for mounting to the link rod (D). Make sure you use the correct holes for your windrower model (see illustration below).



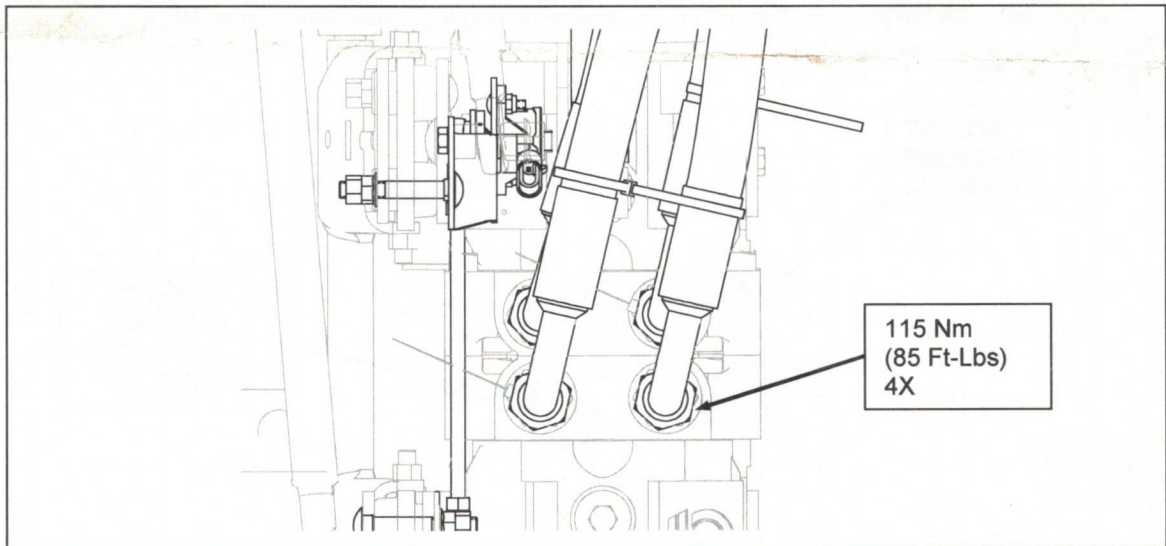
M150/M155/M200/M205

MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS



M100/M105

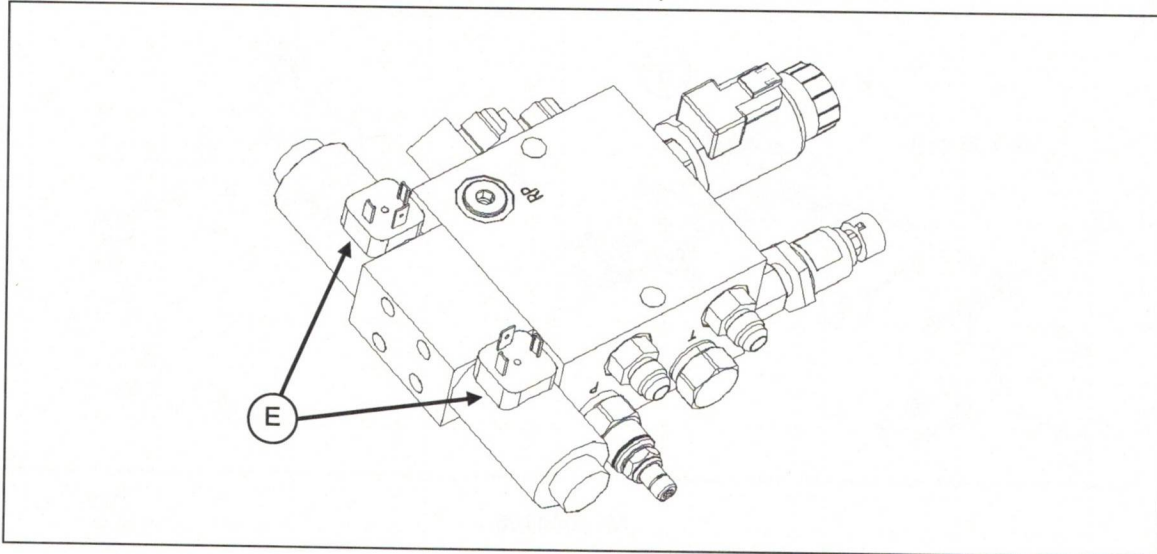
5. Check clearance between the sensor and adjacent hoses and adjust to maintain 1/5 in. (5 mm) of clearance throughout the entire range of steering arm movement. If hoses are repositioned tighten as specified.



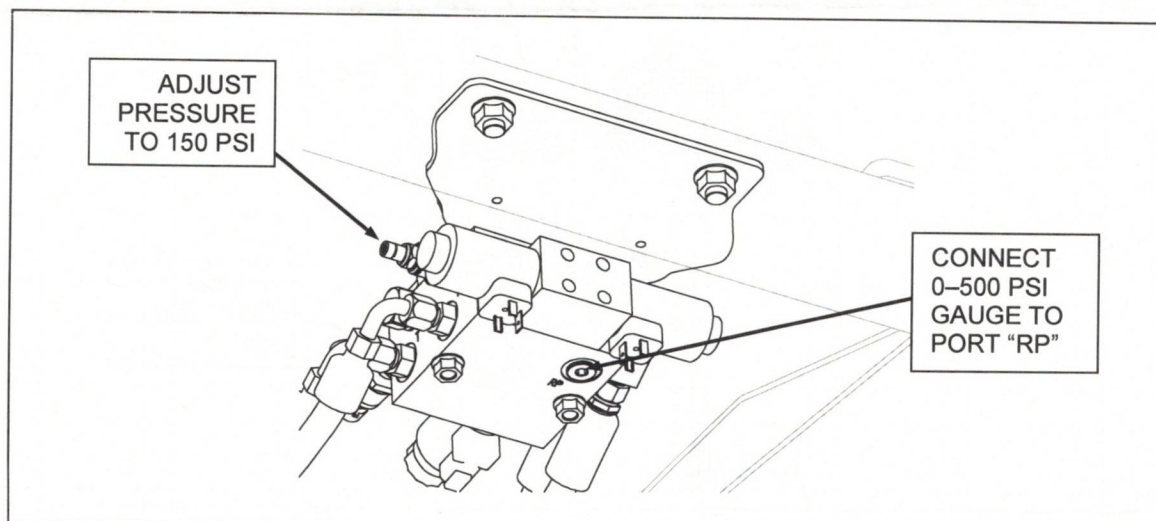
M150/M155/M200/M205

MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS

6. On steering manifold, rotate connectors (E) 90° into the position shown below.

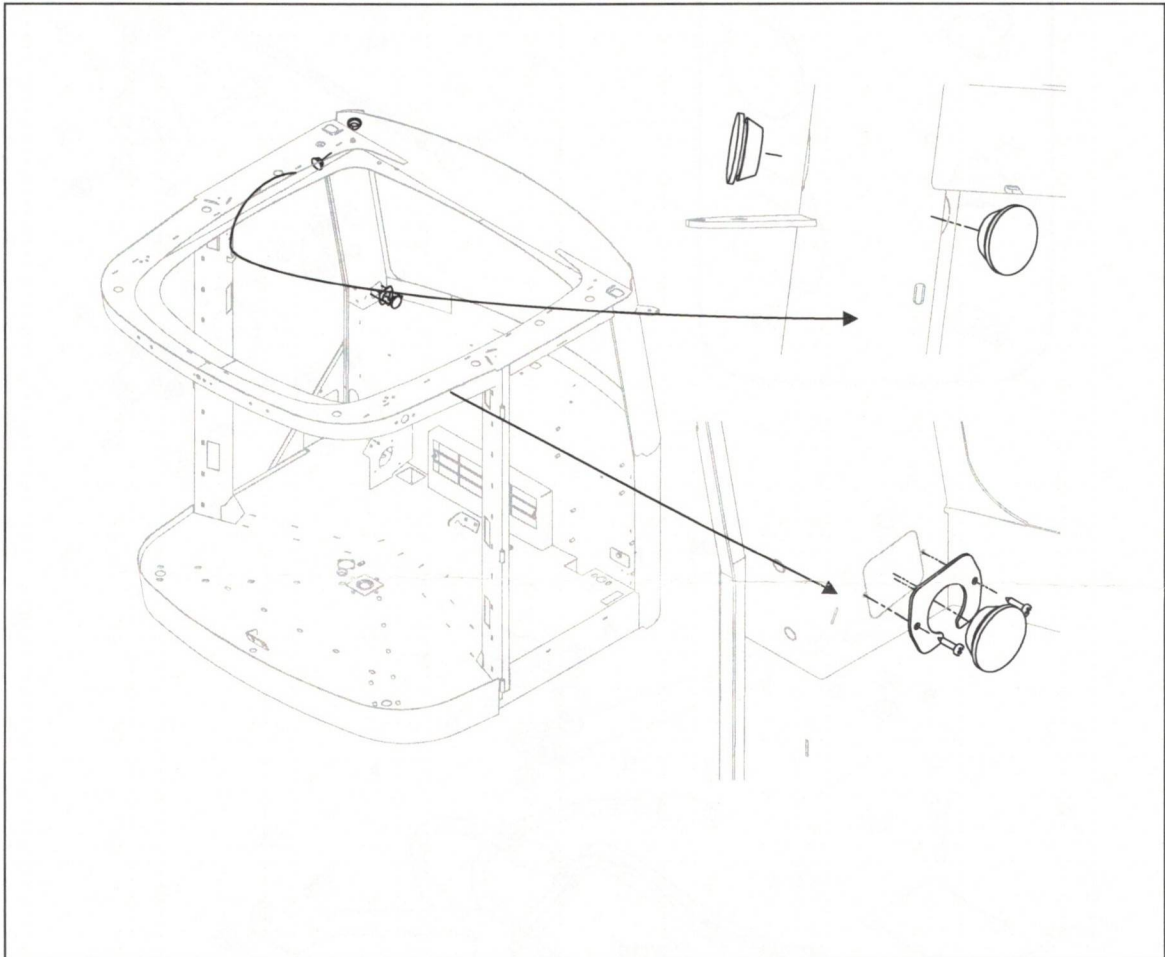


7. Connect a device capable of measuring 0–500 psi into port “RP” of the steering manifold using a SAE -6 ORB connector. Start the engine and check for leaks. While the engine is running, if required, loosen jam nut and adjust the pressure reducing valve to 150 ± 5 psi measured at “RP”. Secure valve adjustment with the jam nut. Turn off engine and remove gauge. Reinstall plug in “RP”.



MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS

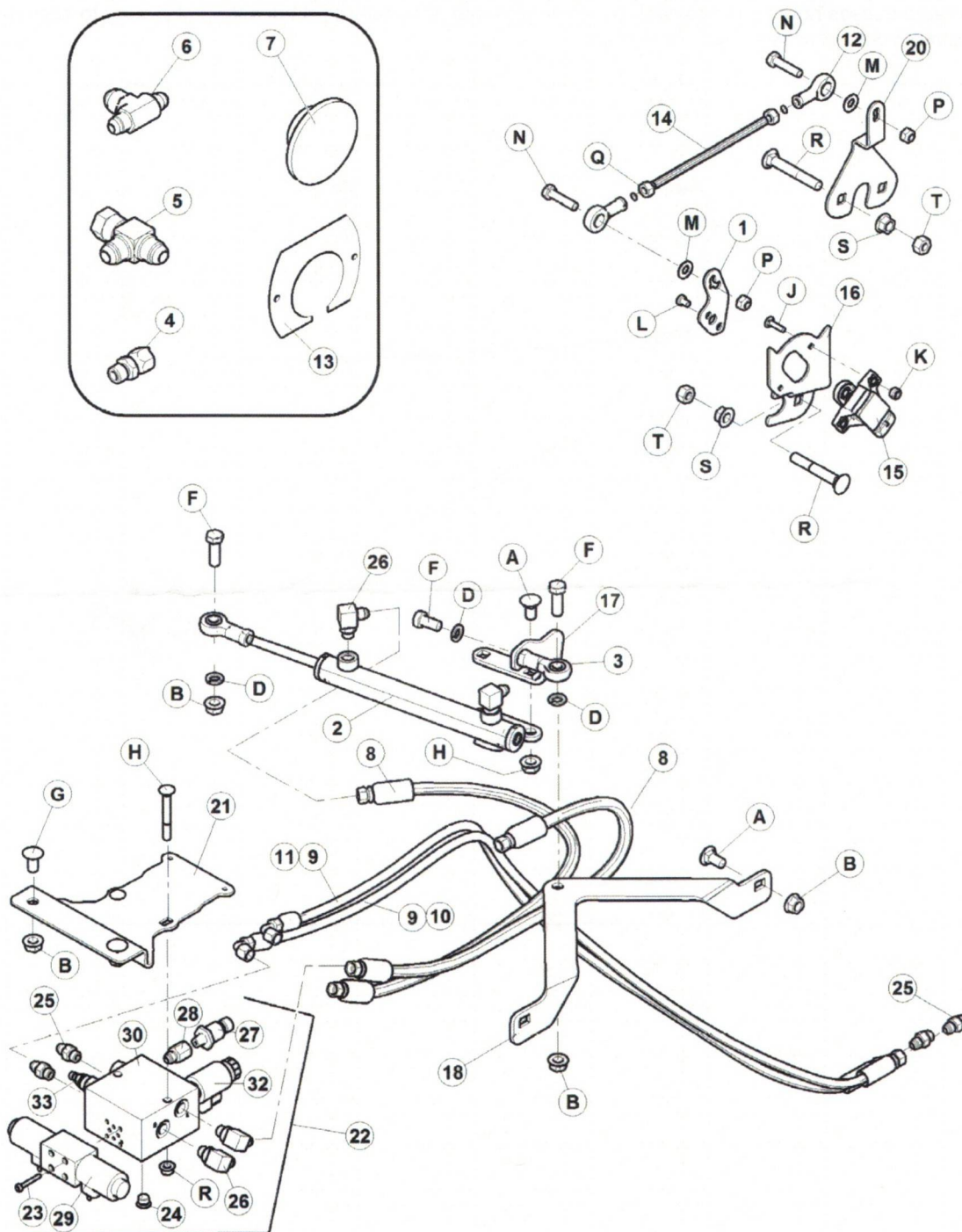
8. Grommets and a cover plate are supplied to seal harness routing provisions. Once cabling is installed the holes must be sealed to reduce noise intrusion and enable optimal cab ventilation performance. Early model M-series may not have knockout panels present, if required use 1-1/2 in. hole saw to create access holes and seal with supplied grommet. Carefully peel back the upholstery to access knock outs in the two locations shown.



MacDon M-Series Windrower **AUTOSTEER INSTALLATION INSTRUCTIONS**

Parts List

The Autosteer kit includes the following parts:



NOTE: More parts shown on page 14.

**MacDon M-Series Windrower
AUTOSTEER INSTALLATION INSTRUCTIONS**

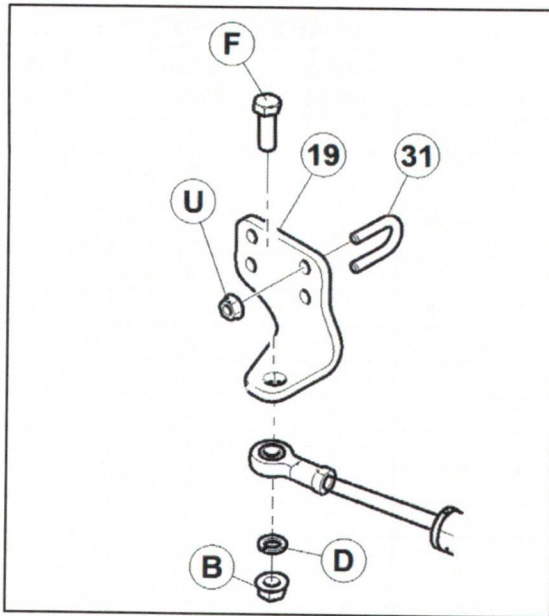
REF #	PART #	DESCRIPTION	QUANTITY REQUIRED FOR		
			M100 M105	M150 M200	M155 M205
1	173155	ARM – LINKAGE	1	1	1
2	173007	CYLINDER – THROUGH ROD	1	1	1
4	135015	FITTING – ADAPTER HYD	1	0	0
5	108268	FITTING – HYD TEE	1	2	0
6	173119	FITTING – TEE HYD	1	0	0
7	173139	GROMMET	3	3	3
8	173547	HOSE – HYDRAULIC	2	2	2
9	173222	HOSE – HYDRAULIC	0	0	2
10	173033	HOSE – HYDRAULIC CHARGE	1	1	0
11	173034	HOSE – HYDRAULIC RETURN	1	1	0
12	109312	JOINT – BALL, 5/16 IN. FEMALE	2	2	2
13	173140	PLATE – COVER	1	1	1
14	173113	ROD – LINK	1	1	1
15	173091	SENDER – ROTARY POSITION	1	1	1
16	173170	SUPPORT – SENSOR MOUNT	1	1	1
17	173208	SUPPORT – CYLINDER BALL JOINT	0	1	1
	173209	SUPPORT – CYLINDER BALL JOINT	1	0	0
18	173016	SUPPORT – CYLINDER BASE	0	1	1
	173076	SUPPORT – CYLINDER BASE	1	0	0
19	166468	SUPPORT – CYLINDER END	0	See notes 1 & 2	1
	173012	SUPPORT – CYLINDER ROD	0	See notes 1 & 2	0
	173057	SUPPORT – CYLINDER ROD	1	0	0
20	173115	SUPPORT – LINKAGE MOUNT	1	1	1
21	173006	SUPPORT – MANIFOLD	1	1	1
22	173066	VALVE – STEERING MANIFOLD ASSEMBLY	1	1	1
23	173117	BOLT	4	4	4
24	100577	PLUG – HEX SOCKET 0.8 X 35 LG ZP	1	1	1
25	15903	FITTING – ADAPTOR	0	0	2
26	30282	FITTING – ELBOW	2	2	2
27	173116	SENSOR – PRESSURE 500 PSI	1	1	1
28	53157	FITTING – ADAPTOR CW O-RING	1	1	1
29	173029	VALVE – STEERING MANIFOLD ASSY	1	1	1
29a	173562	COIL – SOLENOID	2	2	2
29b	173564	SEAL KIT	2	2	2

NOTE 1: 166468 (quantity 1) used on M150 in 2010–2011 production year; 173012 (quantity 1) used in prior production years.

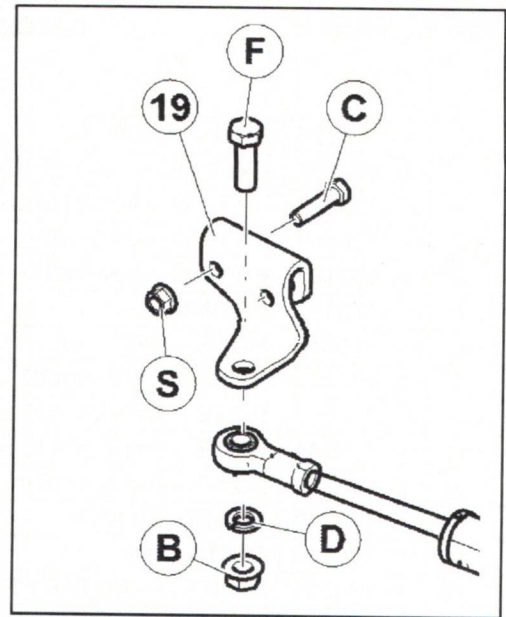
NOTE 2: 166468 (quantity 1) and 166469 (quantity 2) can be used to replace support 173012.

(Continued on page 15.)

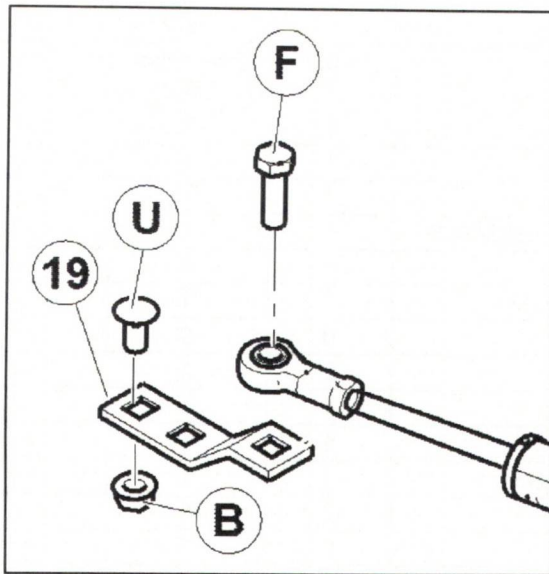
MacDon M-Series Windrower AUTOSTEER INSTALLATION INSTRUCTIONS



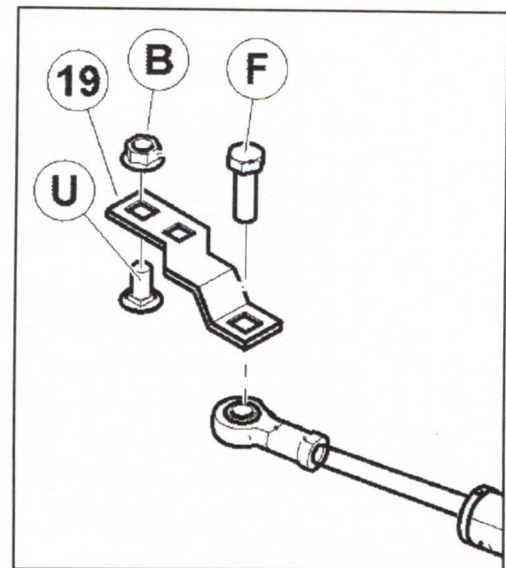
M155/M205 2013



M150 2010-2011
M155 2011-2012
M205 2011-2012



M100/M105



M150/M200 PRE-2010

**MacDon M-Series Windrower
AUTOSTEER INSTALLATION INSTRUCTIONS**

REF #	PART #	DESCRIPTION	QUANTITY REQUIRED FOR		
			M100 M105	M150 M200	M155 M205
30	173118	VALVE – STEERING MANIFOLD ASSY	1	1	1
31	166469	U-BOLT 1/4 X 20 NC 0.5 LG ZP GRD 5	0	See notes 2 & 3	2
32	173068	VALVE – DIRECTIONAL	1	1	1
32a	173561	COIL – SOLENOID	1	1	1
32b	173560	SEAL KIT	1	1	1
33	173040	VALVE – PRESSURE REDUCING/RELIEF	1	1	1
33a	173559	SEAL KIT	1	1	1
A	21066	BOLT – RHSN 1/2 NC X 1 GR 5 ZP	4	4	4
B	50186	NUT – FLG LK SM FACE DT 0.500-13UNC GR5	10	10	8
C	21561	BOLT – HH 3/8 NC X 1.5 LG GR ZP	2	2	0
D	18638	WASHER – REG. LOCK 1/2 IN. NOM. ID ZP	3	3	3
E	30470	BOLT – HEXHD 1/2 NF X 1.0 GR 5 ZP	1	1	1
F	18723	BOLT – HEXHD 1/2 NC X 1.5 LG TFL GR 5 ZP	2	2	2
G	21868	BOLT – RHSSN 1/2 NC X 1.0 GR 5 ZP	2	2	2
H	30307	BOLT – RHSN 3/8 NC X 3.0 LG GR 5 ZP	2	2	2
J	158722	BOLT – RH SN #10-24 NC X 3/4 GR.2 ZP	2	2	2
K	105197	NUT – HEX LOCK 0.187-24UNC	2	2	2
L	158704	SCREW – PHILIPS PNH M6 X 1.0 X 8MM LG	2	2	2
M	18597	WASHER – SAE FLAT 11/32 ID X 11/16 IN OD	2	2	2
N	21526	BOLT – HEXHD 5/16 NC X 1.25 LG GR 5 ZP	2	2	2
P	18690	NUT – HEX LOCK DT 5/16-18 UNC ZP	2	2	2
Q	20214	NUT – HEX 5/16 - 24 UNF GR 5 ZP	2	2	2
R	21478	BOLT – RHSN 3/8 NC X 2.5 LG GR 5 ZP	3	3	3
S	30228	NUT – FLG DT SMTH FACE 0.375-16UNC	5	5	5
T	18590	NUT – HEX 3/8-16 UNC GR 5 ZP	3	3	3
U	135248	NUT – FLG DT SMTH FACE 1/4-20NC GR 5 ZP	0	See note 4	4

NOTE 2: 166468 (quantity 1) and 166469 (quantity 2) can be used to replace support 173012.

NOTE 3: 166469 (quantity 2) used on M150 in 2010–2011 production year.

NOTE 4: 135248 (quantity 4) used on M150 in 2010–2011 production year.

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