

Installation Guide

Installation Kit: 911-6109-10



This installation guide covers various makes and models of equipment. See pages 2 & 3 for supported models.

Supported Models

AGCO	Case IH		Challenger	
DT-180A	Magnum 180	Steiger 330	MT455B	MT635
DT-200A	Magnum 190	Steiger 335	MT455D	MT635B
DT-205B	Magnum 200	Steiger 350	MT455E	MT645
DT-220A	Magnum 210	Steiger 370	MT465	MT645B
DT-225B	Magnum 215	Steiger 380	MT465B	MT645C
DT-240A	Magnum 220	Steiger 385	MT465D	MT645D
DT-250B	Magnum 225	Steiger 400	MT465E	MT645E
DT-275B	Magnum 235	Steiger 420	MT475B	MT655
RT-95	Magnum 240	Steiger 430	MT475D	MT655B
RT-100	Magnum 245	Steiger 435	MT475E	MT655C
RT-100A	Magnum 250	Steiger 450	MT485D	MT655D
RT-120	Magnum 260	Steiger 470	MT485E	MT655E
RT-120A	Magnum 275	Steiger 480	MT495D	MT665
RT-135	Magnum 280	Steiger 485	MT495E	MT665B
RT-140A	Magnum 290	Steiger 500	MT515D	MT665C
RT-150	Magnum 305	Steiger 530	MT515E	MT665D
RT-155A	Magnum 310	Steiger 535	MT525B	MT665E
RT-165A	Magnum 315	Steiger 540	MT525D	MT675C
RT-180A	Magnum 335	Steiger 550	MT525E	MT675D
	Magnum 340	Steiger 580	MT535	MT675E
	Magnum 370	Steiger 600	MT535B	MT685C
	Magnum 380	Steiger 620	MT535D	MT685D
	MX100	STX275	MT535E	MT685E
McCormick	MX100C	STX280	MT545	
MC100	MX110	STX325	MT545B	
MC105	MX120	STX330	MT545D	
MC115	MX135	STX375	MT545E	
MC120	MX150	STX380	MT555B	
MC130	MX170	STX425	MT555D	
MC135	MX180	STX430	MT555E	
MC95	MX200	STX440	MT565	
MTX110	MX210	STX450	MT565B	
MTX120	MX215	STX480	MT565D	
MTX125	MX220	STX500	MT565E	
MTX135	MX230	STX530	MT565E	
MTX140	MX240		MT575B	
MTX145	MX245	Includes Quadtracs	MT575D	
MTX150	MX255		MT575E	
MTX155	MX270		MT585B	
MTX165	MX275		MT585D	
MTX175	MX285		MT585E	
MTX185	MX305		MT595B	
MTX200			MT595D	
TTX190				
TTX210				
TTX230				
ZTX230				
ZTX260				
ZTX280				

Supported Models

New Holland		Massey Ferguson		
T8.275	T9020	5465	7465	8220
T8.300	T9030	5470	7475	8240
T8.320	T9040	5475	7480	8245
T8.330	T9050	5480	7485	8250
T8.350	T9060	5609	7490	8260
T8.360	TG210	5610	7495	8270
T8.380	TG215	5611	7497	8280
T8.390	TG230	5612	7499	8450
T8.410	TG245	5613	7614	8460
T8.420	TG255	5710	7615	8470
T8.435	TG275	5711	7616	8480
T8010	TG285	5711SL	7618	8650
T8020	TG305	5712SL	7619	8660
T8030	TJ275	5713SL	7620	8670
T8040	TJ280	6465	7622	8680
T8050	TJ325	6475	7624	8690
T9.390	TJ330	6480	7626	8727
T9.435	TJ375	6485	7714	8727S
T9.450	TJ380	6490	7715	8730
T9.480	TJ425	6495	7716	8730S
T9.505	TJ430	6497	7718	8732
T9.530	TJ450	6499	7719	8732S
T9.530	TJ480	6614	7720	8735
T9.560	TJ500	6615	7722	8735S
T9.565	TJ530	6616	7724	8737
T9.600		6712		8737S
T9.615		6713		
T9.645		6714S		
T9.670		6715S		
T9.700		6716S		

Introduction

The procedures outlined in this guide provide the basic installation procedure for the ESi² on the machines specified on the front cover of this guide. If you do not see your machine listed, contact customer support for further instruction. The kit components and corresponding install instructions are designated for each applicable machine make and model and may not be used on undesignated machine models.

Review Installation Kit Contents

Kit contents are outlined in the ESi² installation section on pages 10 and 11. Read all applicable installation instructions for your machine's model and ensure that all required kit components are present before beginning the installation.

NOTE: Due to manufacturing processes outside of Outback Guidance's control, the installer may have to adapt this kit to your distinct situation.

Read and Follow All Safety Messages

- Refer to the safety manual for the machine that the ESi² is being installed on for operating age and precautions.
- Prior to installing and operating the ESi², read and understand all safety precautions as outlined in this guide
- Store this guide and all related safety information with related machine manuals for future reference.

Safety Information and Warnings*

- ESi² is NOT designed to replace the machine's operator and is designed as a driving aid for use in precision agriculture applications.
- ESi² is NOT intended for use on roadways and should remain disengaged at all times when traveling on roadways.
- ESi² does NOT control the speed of the machine and a human operator is required to manually maintain a safe operating speed.
- ESi² does NOT avoid obstacles. To prevent human, machine and property injury a human operator is required to operate the machine at all times.
- Do NOT allow anyone to operate without instructions.
- At all times the driver is fully responsible for the safe operation of the vehicle.

* The safety warnings contained in this installation guide are not meant to be an exhaustive list of potential hazards.

Introduction

- To ensure peak performance, ESi² should only be installed after a thorough machine inspection has been conducted. The contents of this kit and ESi² are not intended to replace preventative and or needed maintenance. To avoid bodily and machine injury, follow the machine preparation checklist below:
 - ⇒ Inspect steering linkage: Machine should drive in a straight line without manual correction
 - ⇒ Turn off machine and power-off all electronic gauges, monitors and external devices when installing or performing maintenance on the ESi²
 - ⇒ Park machine on a clean and level surface
 - ⇒ Lower all implements and headers to the ground
 - ⇒ Apply the parking break and chock wheels
 - ⇒ Inspect any drilling and/or cutting sites to ensure no electrical wiring damage will be incurred

Install Guide Index

This installation guide covers multiple machine types. Refer to the index below to find the section that applies to your machine.

Install #1

Case IH and New Holland Tractors

For machine specific installation instructions start at page 9.



Install #2

Case IH and New Holland Tractors

For machine specific installation instructions start at page 13.



Install #3

New Holland Tractors

For machine specific installation instructions start at page 17.



Install #4

Case IH and McCormick MFWD Tractors

For machine specific installation instructions start at page 21.



Install Guide Index

Install #5

AGCO MFWD Tractors

For machine specific installation instructions start at page 25.



Install #6

AGCO MFWD Tractors

For machine specific installation instructions start at page 29.



Install #1

Case IH and New Holland Tractors

Remove the steering wheel center cap and the nut holding the steering wheel onto the shaft.

SAVE the nut as it will be used later in this installation.

Following the manufacturer's recommended procedure remove the steering wheel.

NOTE: Consult your equipment dealer if you are unsure of the correct procedure for removing the steering wheel.

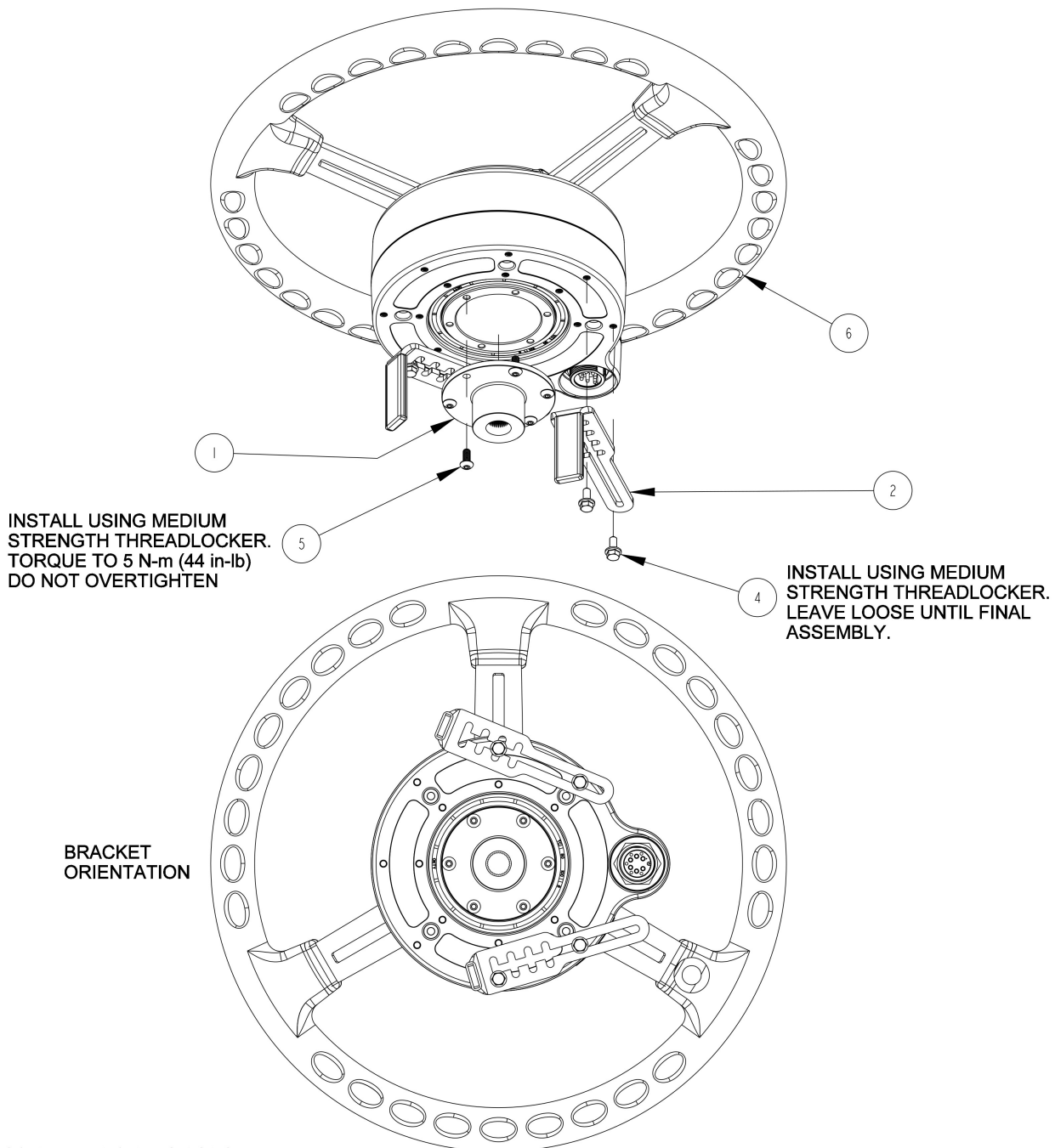


Steering column is ready for ESi² installation.



Install #1

Case IH and New Holland Tractors

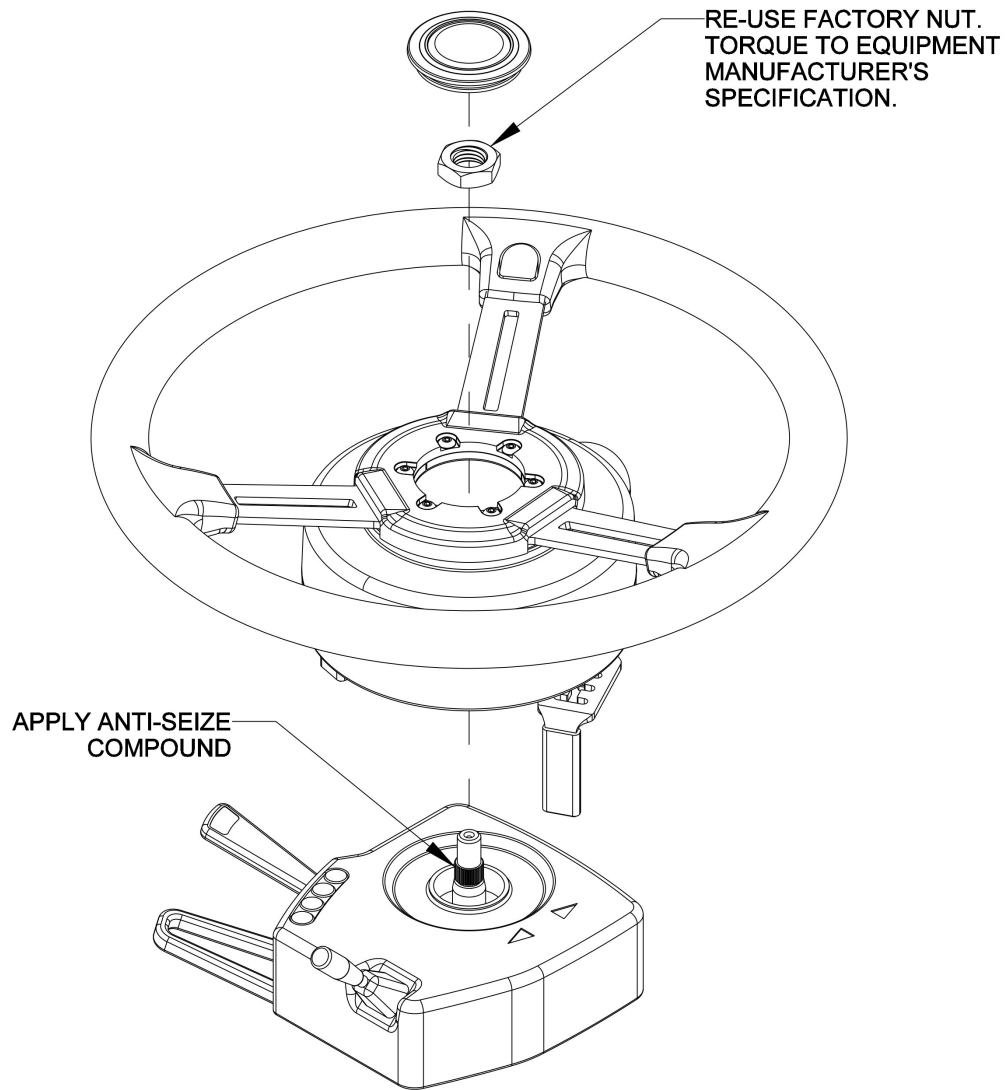


ASSEMBLY INSTRUCTIONS:

1. PRE-ASSEMBLE SPLINE ADAPTER AND BRACKETS TO WHEEL MOTOR.
2. PLACE ASSEMBLY ON STEERING SHAFT AND RE-INSTALL STEERING SHAFT NUT.
3. ADJUST BRACKETS TO FIT SNUG AGAINST THE STEERING COLUMN.
4. TIGHTEN SCREWS ATTACHING BRACKETS TO BOTTOM OF MOTOR. TORQUE TO 5 N-m (44 in-lb). DO NOT OVERTIGHTEN. ENSURE THAT THE ANTI-ROTATION BRACKETS DO NOT CONTACT THE SPLINE ADAPTER. ENSURE THAT THE MOTOR DOES NOT MOVE IN RELATION TO THE STEERING COLUMN.
5. ROTATE THE WHEEL A FULL TURN TO ENSURE THERE IS NO INTERFERENCE BETWEEN THE BRACKETS AND SPLINE ADAPTER, OR ANY MOVING PARTS AND MACHINE CONTROLS.

Install #1

Case IH and New Holland Tractors



ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	604-0071-10	SPLINE ADAPTER- ESI2, 36T x .630 MAJOR x 1.200 OFFSET	
2	2	640-0184-01	ANTI-ROTATION BRACKET	
3	1	675-0126-000	LOCTITE 242 MEDIUM STRENGTH THREADLOCKER	NOT SHOWN
4	4	675-1345-10	SCREW, M5-0.8 X 12MM, HEX FLANGE	
5	6	675-1351-10	SCREW, M5-0.8 X 12MM, BUTTON HEAD	
6	1	910-4024-10	ESI2 ELECTRIC STEERING WHEEL	

Install #1

Case IH and New Holland Tractors

ESi² wheel successfully installed



Install #2

Case IH and New Holland Tractors

Remove the steering wheel center cap and the nut holding the steering wheel onto the shaft.

SAVE the nut as it will be used later in this installation.

Following the manufacturer's recommended procedure remove the steering wheel.

NOTE: Consult your equipment dealer if you are unsure of the correct procedure for removing the steering wheel.

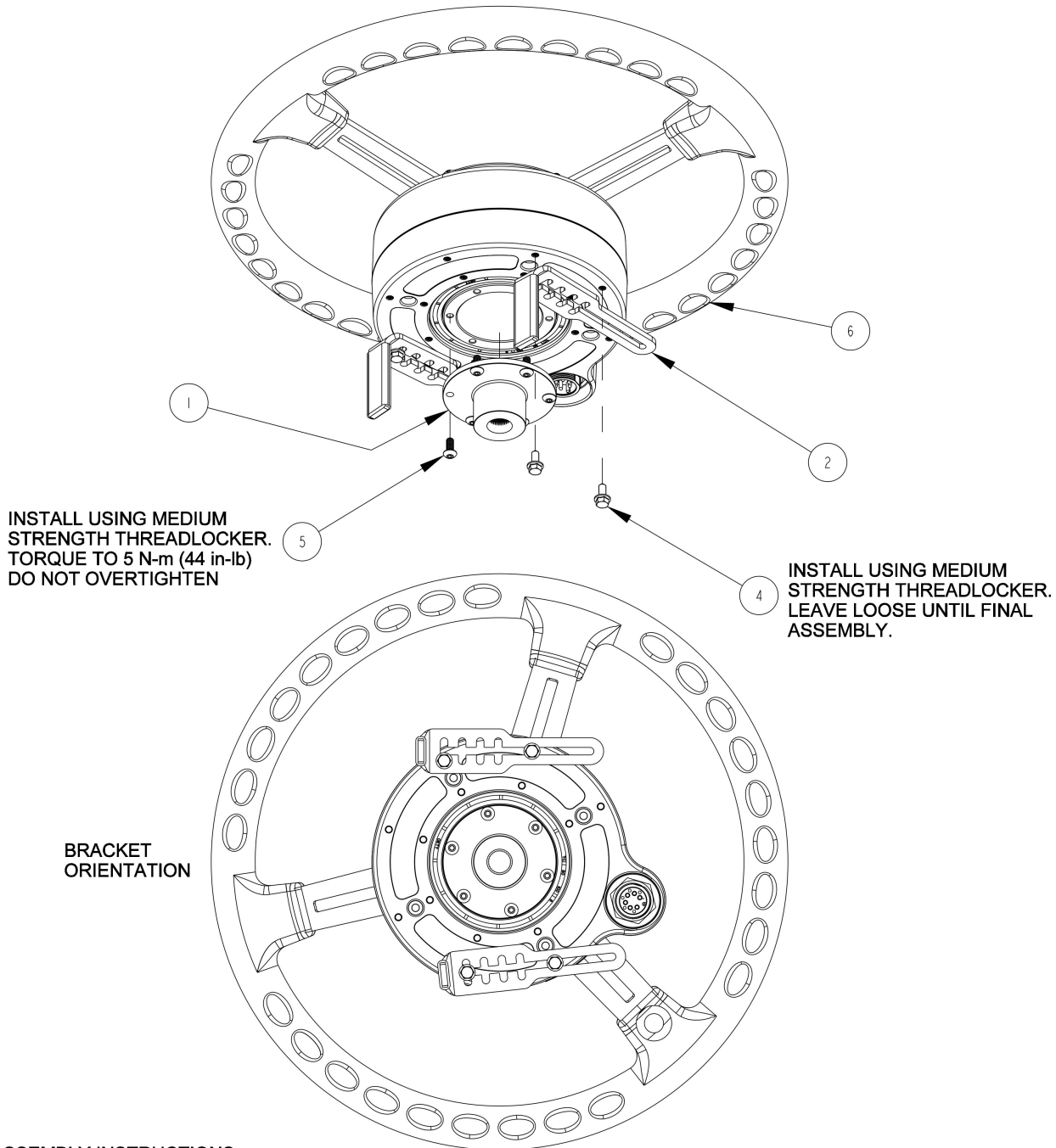


Steering column is ready for ESi² installation.



Install #2

Case IH and New Holland Tractors

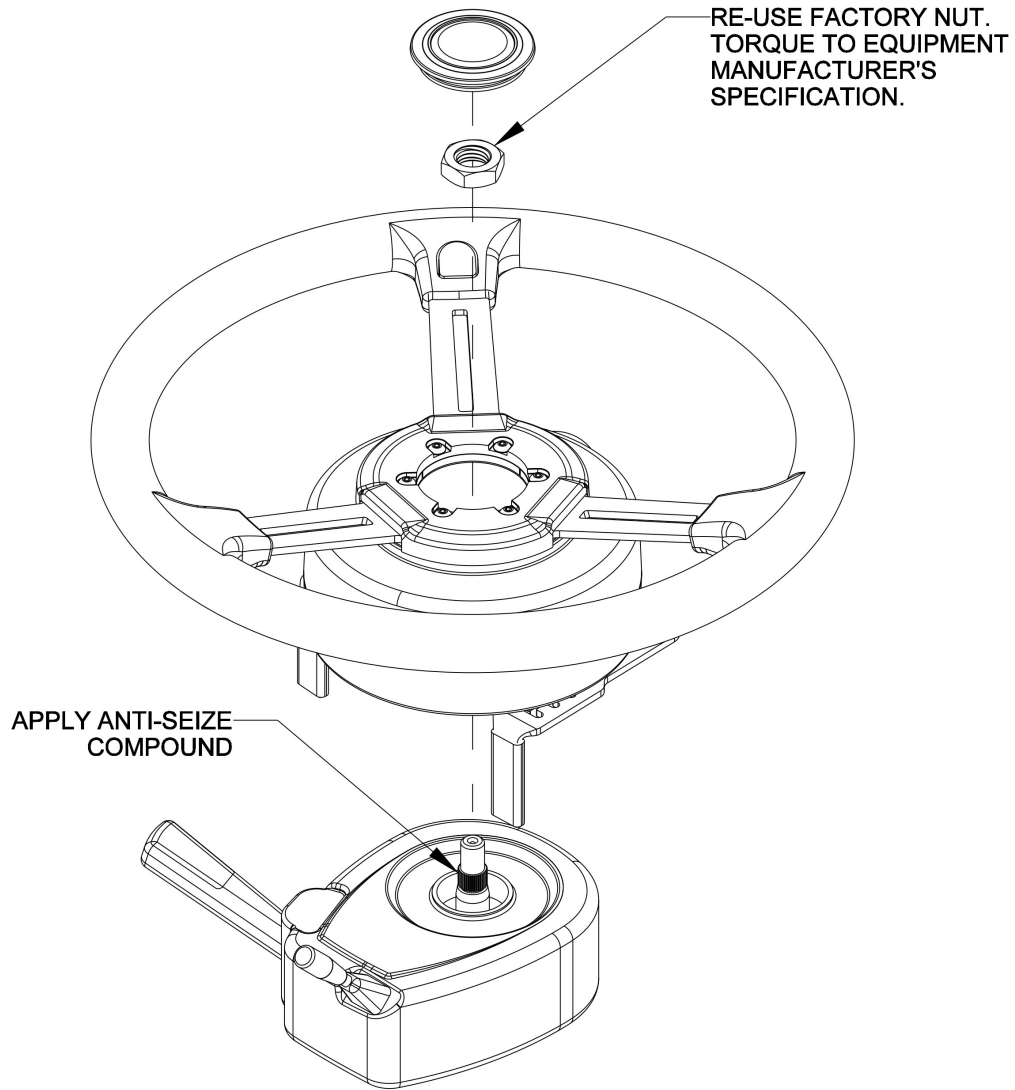


ASSEMBLY INSTRUCTIONS:

1. PRE-ASSEMBLE SPLINE ADAPTER AND BRACKETS TO WHEEL MOTOR.
2. PLACE ASSEMBLY ON STEERING SHAFT AND RE-INSTALL STEERING SHAFT NUT.
3. ADJUST BRACKETS TO FIT SNUG AGAINST THE STEERING COLUMN.
4. TIGHTEN SCREWS ATTACHING BRACKETS TO BOTTOM OF MOTOR.
TORQUE TO 5 N-m (44 in-lb). DO NOT OVERTIGHTEN.
ENSURE THAT THE ANTI-ROTATION BRACKETS DO NOT CONTACT THE SPLINE ADAPTER.
ENSURE THAT THE MOTOR DOES NOT MOVE IN RELATION TO THE STEERING COLUMN.
5. ROTATE THE WHEEL A FULL TURN TO ENSURE THERE IS NO INTERFERENCE BETWEEN THE BRACKETS AND SPLINE ADAPTER, OR ANY MOVING PARTS AND MACHINE CONTROLS.

Install #2

Case IH and New Holland Tractors



ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	604-0071-10	SPLINE ADAPTER- ESi2, 36T x .630 MAJOR x 1.200 OFFSET	
2	2	640-0184-01	ANTI-ROTATION BRACKET	
3	1	675-0126-000	LOCTITE 242 MEDIUM STRENGTH THREADLOCKER	NOT SHOWN
4	4	675-1345-10	SCREW, M5-0.8 X 12MM, HEX FLANGE	
5	6	675-1351-10	SCREW, M5-0.8 X 12MM, BUTTON HEAD	
6	1	910-4024-10	ESi2 ELECTRIC STEERING WHEEL	

Install #2

Case IH and New Holland Tractors

ESi² wheel successfully installed



Install #3

New Holland Tractors

Remove the steering wheel center cap and the nut holding the steering wheel onto the shaft.

SAVE the nut as it will be used later in this installation.

Following the manufacturer's recommended procedure remove the steering wheel.

NOTE: Consult your equipment dealer if you are unsure of the correct procedure for removing the steering wheel.

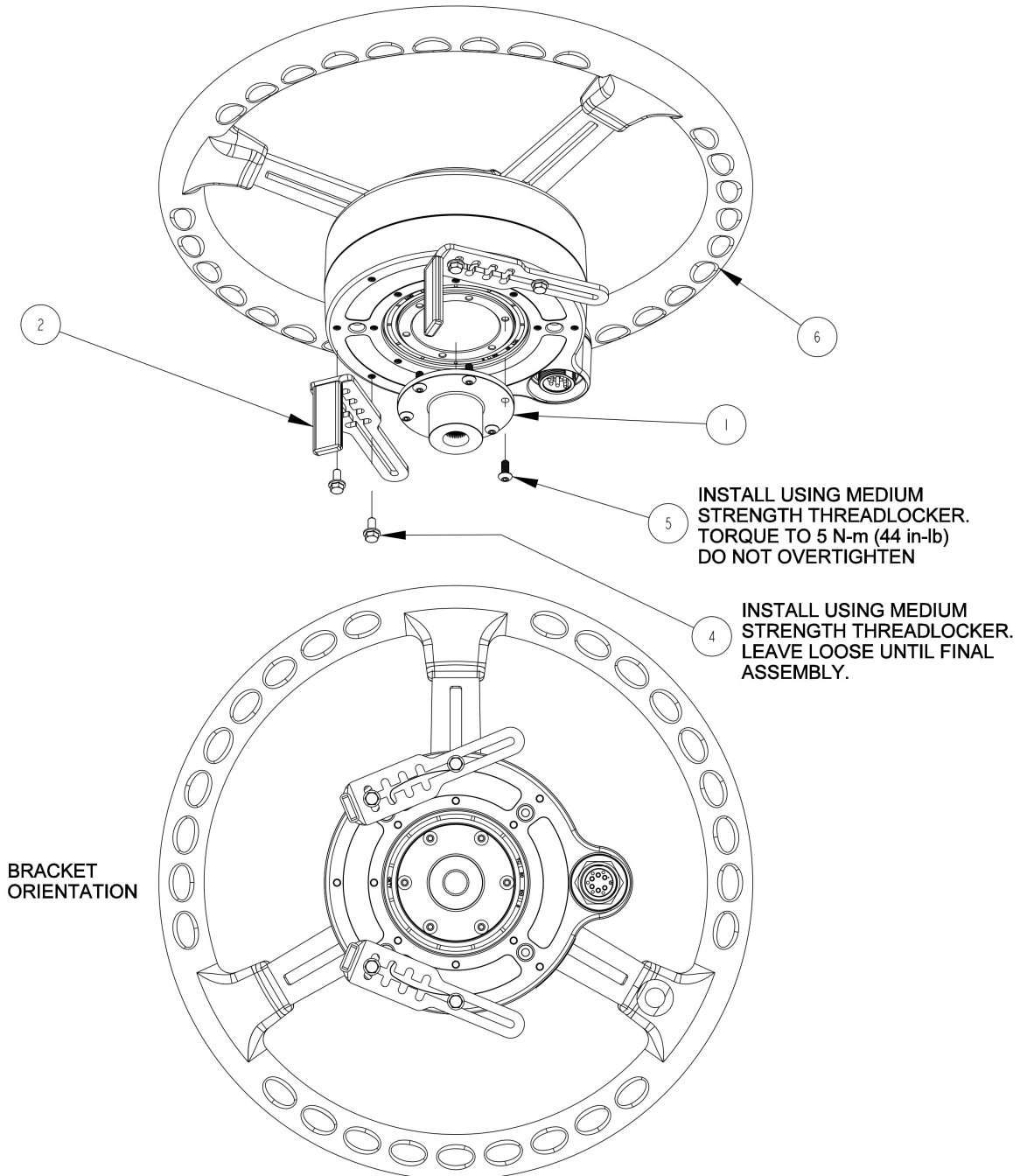


Steering column is ready for ESi² installation.



Install #3

New Holland Tractors

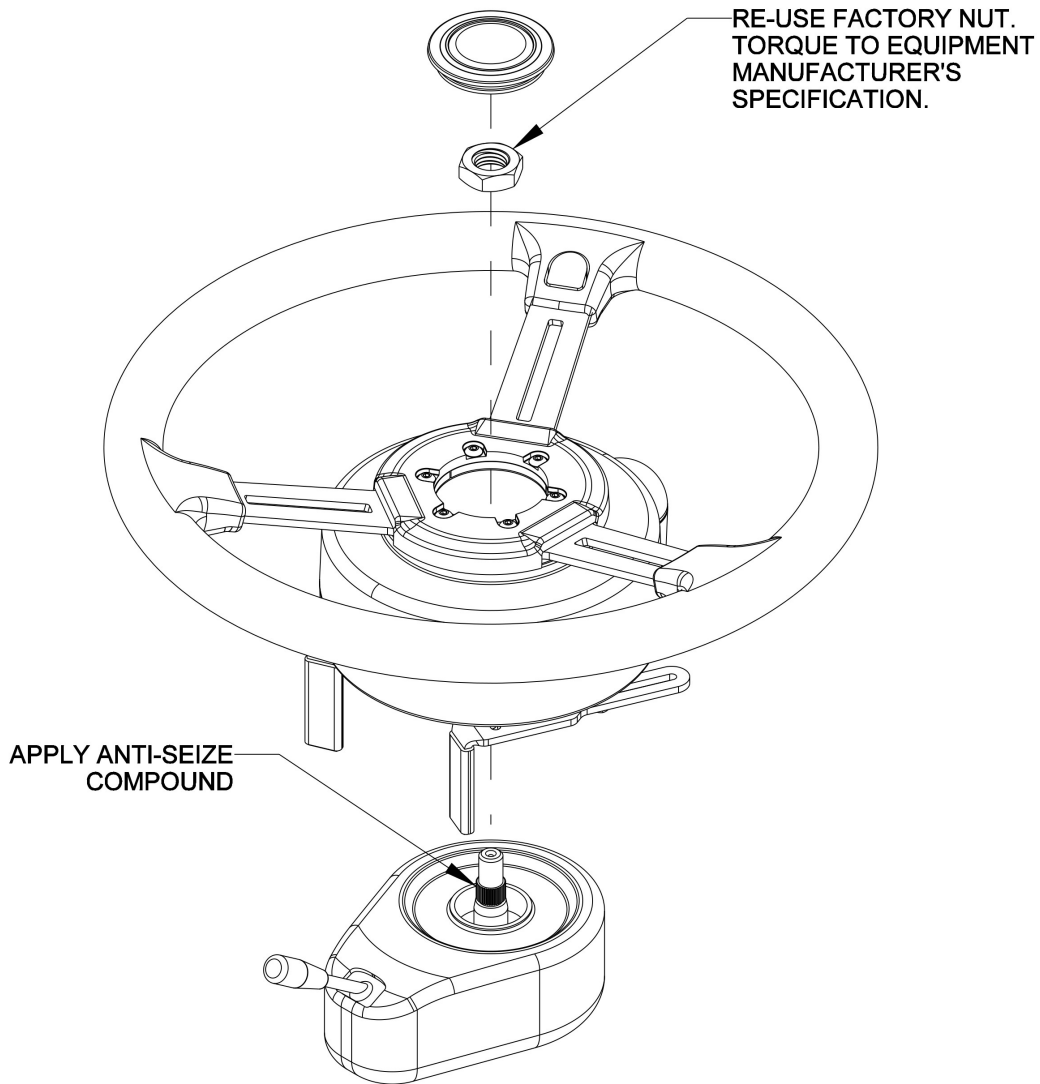


ASSEMBLY INSTRUCTIONS:

1. PRE-ASSEMBLE SPLINE ADAPTER AND BRACKETS TO WHEEL MOTOR.
2. PLACE ASSEMBLY ON STEERING SHAFT AND RE-INSTALL STEERING SHAFT NUT.
3. ADJUST BRACKETS TO FIT SNUG AGAINST THE STEERING COLUMN.
4. TIGHTEN SCREWS ATTACHING BRACKETS TO BOTTOM OF MOTOR. TORQUE TO 5 N-m (44 in-lb). DO NOT OVERTIGHTEN. ENSURE THAT THE ANTI-ROTATION BRACKETS DO NOT CONTACT THE SPLINE ADAPTER. ENSURE THAT THE MOTOR DOES NOT MOVE IN RELATION TO THE STEERING COLUMN.
5. ROTATE THE WHEEL A FULL TURN TO ENSURE THERE IS NO INTERFERENCE BETWEEN THE BRACKETS AND SPLINE ADAPTER, OR ANY MOVING PARTS AND MACHINE CONTROLS.

Install #3

New Holland Tractors



ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	604-0071-10	SPLINE ADAPTER- ESI2, 36T x .630 MAJOR x 1.200 OFFSET	
2	2	640-0184-01	ANTI-ROTATION BRACKET	
3	1	675-0126-000	LOCTITE 242 MEDIUM STRENGTH THREADLOCKER	NOT SHOWN
4	4	675-1345-10	SCREW, M5-0.8 X 12MM, HEX FLANGE	
5	6	675-1351-10	SCREW, M5-0.8 X 12MM, BUTTON HEAD	
6	1	910-4024-10	ESI2 ELECTRIC STEERING WHEEL	

Install #3

New Holland Tractors

ESi² wheel successfully installed



Install #4

Case IH and McCormick MFWD Tractors

Remove the steering wheel center cap and the nut holding the steering wheel onto the shaft.

SAVE the nut as it will be used later in this installation.

Following the manufacturer's recommended procedure remove the steering wheel.

NOTE: Consult your equipment dealer if you are unsure of the correct procedure for removing the steering wheel.

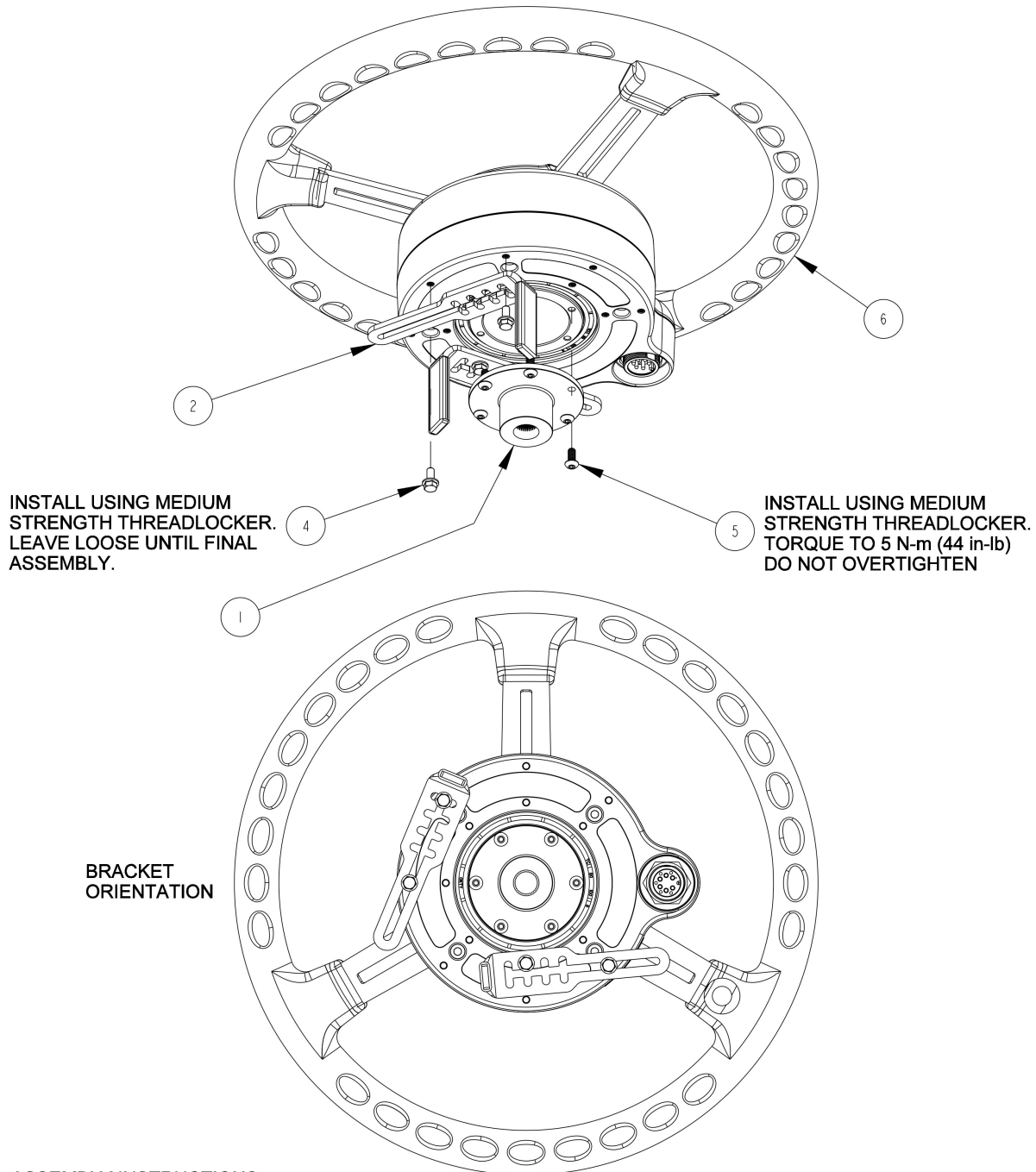


Steering column is ready for ESi² installation.



Install #4

Case IH and McCormick MFWD Tractors

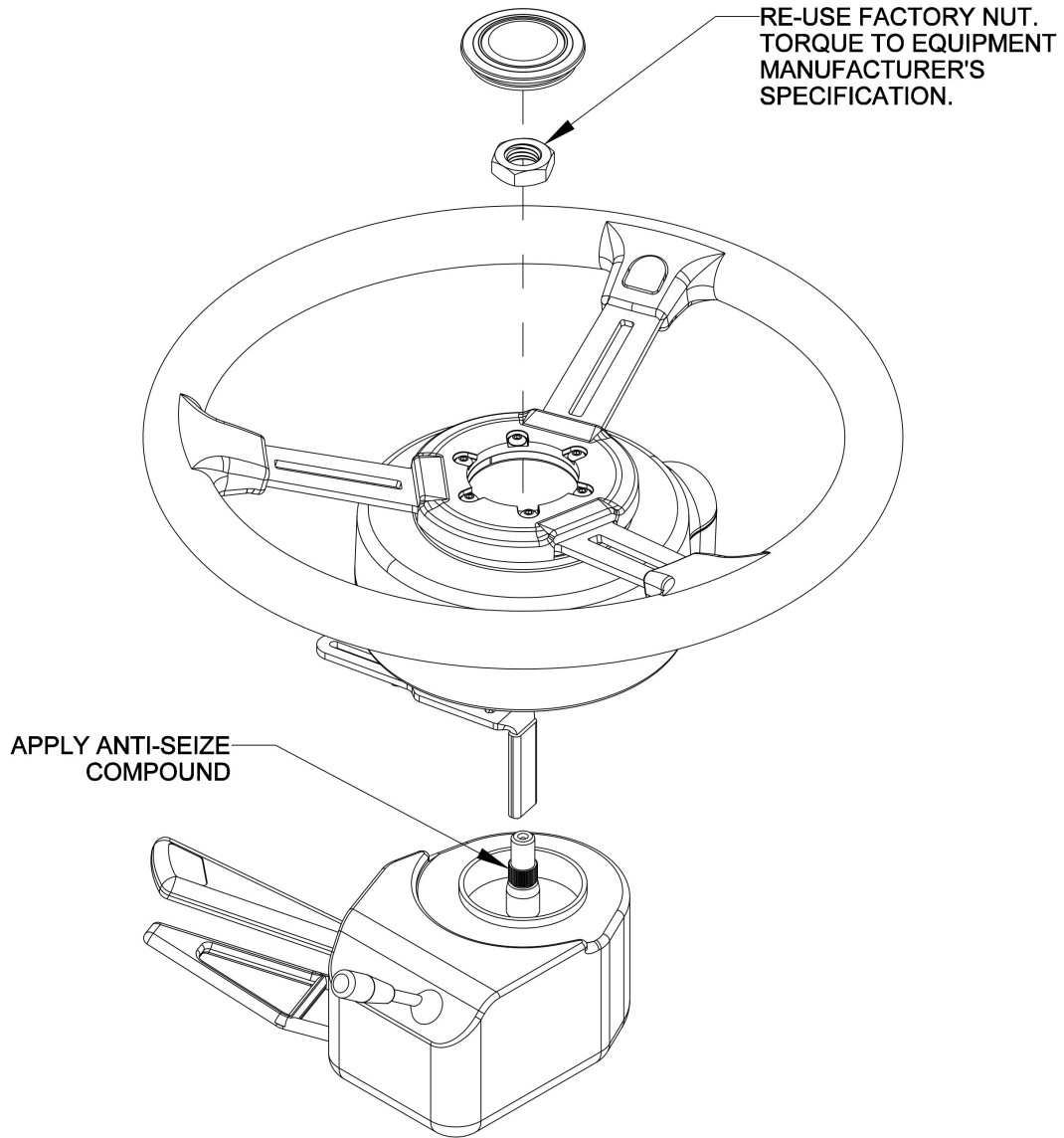


ASSEMBLY INSTRUCTIONS:

1. PRE-ASSEMBLE SPLINE ADAPTER AND BRACKETS TO WHEEL MOTOR.
2. PLACE ASSEMBLY ON STEERING SHAFT AND RE-INSTALL STEERING SHAFT NUT.
3. ADJUST BRACKETS TO FIT SNUG AGAINST THE STEERING COLUMN.
4. TIGHTEN SCREWS ATTACHING BRACKETS TO BOTTOM OF MOTOR.
TORQUE TO 5 N-m (44 in-lb). DO NOT OVERTIGHTEN.
ENSURE THAT THE ANTI-ROTATION BRACKETS DO NOT CONTACT THE SPLINE ADAPTER.
ENSURE THAT THE MOTOR DOES NOT MOVE IN RELATION TO THE STEERING COLUMN.
5. ROTATE THE WHEEL A FULL TURN TO ENSURE THERE IS NO INTERFERENCE BETWEEN THE BRACKETS AND SPLINE ADAPTER, OR ANY MOVING PARTS AND MACHINE CONTROLS.

Install #4

Case IH and McCormick MFWD Tractors



ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	604-0071-10	SPLINE ADAPTER- ES12, 36T x .630 MAJOR x 1.200 OFFSET	
2	2	640-0184-01	ANTI-ROTATION BRACKET	
3	1	675-0126-000	LOCTITE 242 MEDIUM STRENGTH THREADLOCKER	NOT SHOWN
4	4	675-1345-10	SCREW, M5-0.8 X 12MM, HEX FLANGE	
5	6	675-1351-10	SCREW, M5-0.8 X 12MM, BUTTON HEAD	
6	1	910-4024-10	ES12 ELECTRIC STEERING WHEEL	

Install #4

Case IH and McCormick MFWD Tractors

ESi² wheel successfully installed



Install #5

AGCO MFWD Tractors

Remove the steering wheel center cap and the nut holding the steering wheel onto the shaft.

SAVE the nut as it will be used later in this installation.

Following the manufacturer's recommended procedure remove the steering wheel.

NOTE: Consult your equipment dealer if you are unsure of the correct procedure for removing the steering wheel.

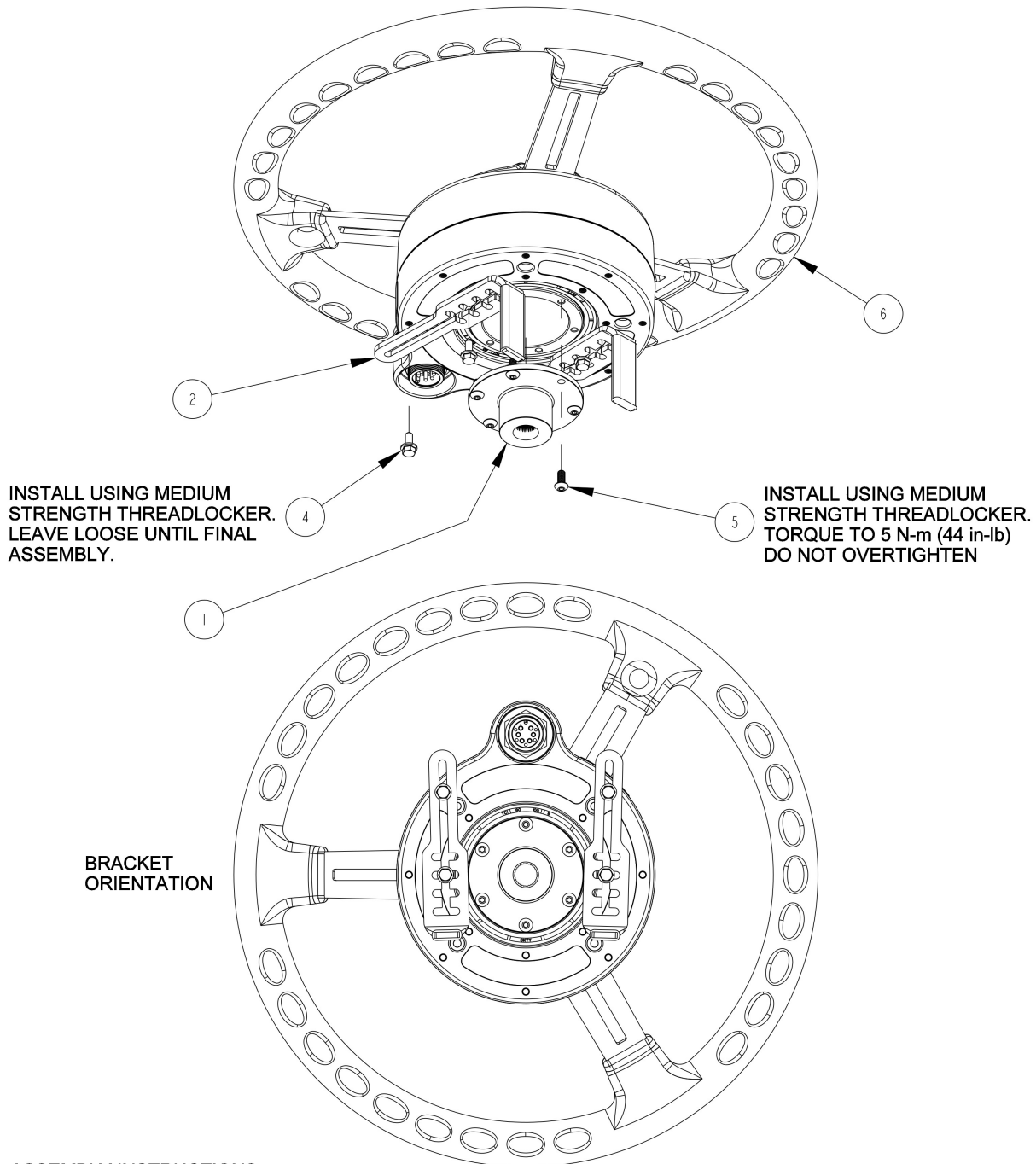


Steering column is ready for ESi² installation.



Install #5

AGCO MFWD Tractors

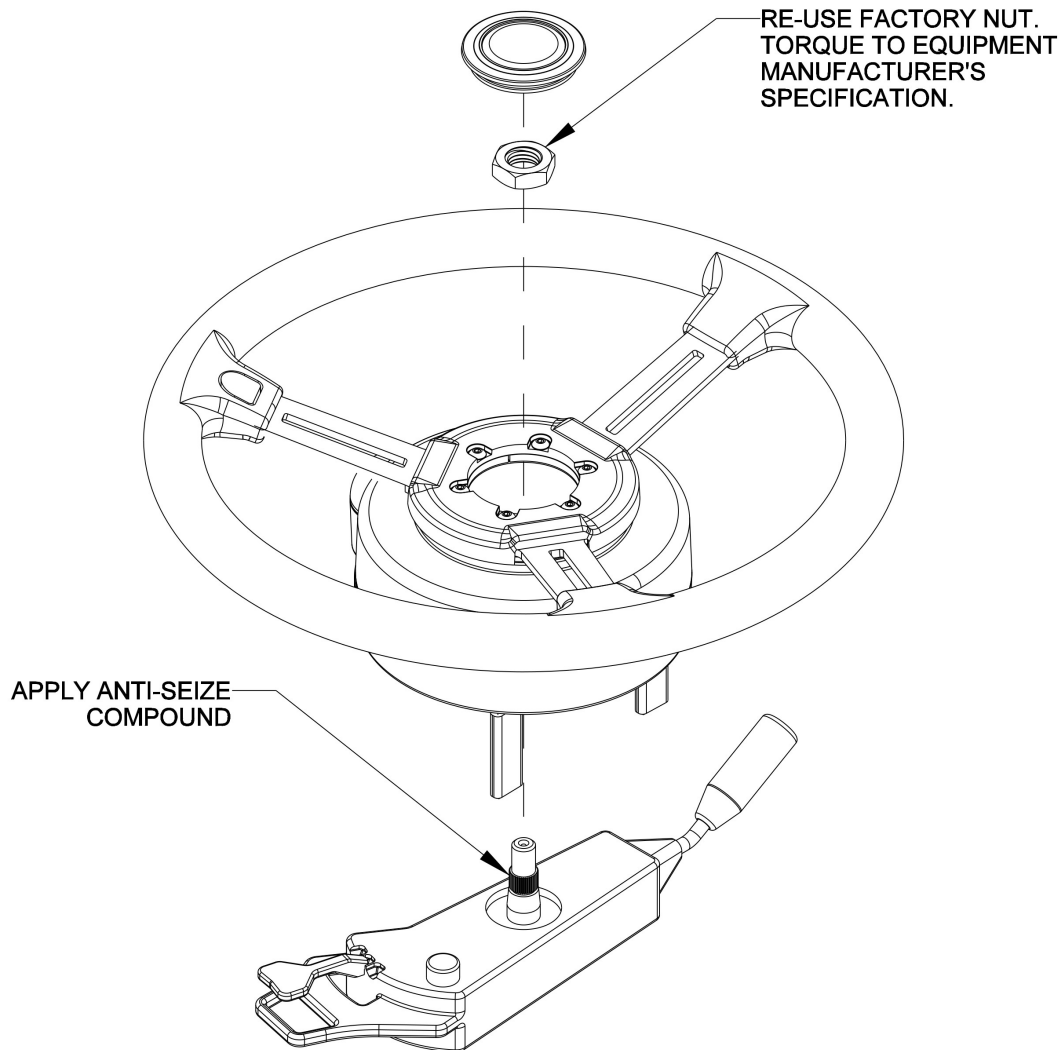


ASSEMBLY INSTRUCTIONS:

1. PRE-ASSEMBLE SPLINE ADAPTER AND BRACKETS TO WHEEL MOTOR.
2. PLACE ASSEMBLY ON STEERING SHAFT AND RE-INSTALL STEERING SHAFT NUT.
3. ADJUST BRACKETS TO FIT SNUG AGAINST THE STEERING COLUMN.
4. TIGHTEN SCREWS ATTACHING BRACKETS TO BOTTOM OF MOTOR. TORQUE TO 5 N-m (44 in-lb). DO NOT OVERTIGHTEN. ENSURE THAT THE ANTI-ROTATION BRACKETS DO NOT CONTACT THE SPLINE ADAPTER. ENSURE THAT THE MOTOR DOES NOT MOVE IN RELATION TO THE STEERING COLUMN.
5. ROTATE THE WHEEL A FULL TURN TO ENSURE THERE IS NO INTERFERENCE BETWEEN THE BRACKETS AND SPLINE ADAPTER, OR ANY MOVING PARTS AND MACHINE CONTROLS.

Install #5

AGCO MFWD Tractors



ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	604-0071-10	SPLINE ADAPTER- ESI2, 36T x .630 MAJOR x 1.200 OFFSET	
2	2	640-0184-01	ANTI-ROTATION BRACKET	
3	1	675-0126-000	LOCTITE 242 MEDIUM STRENGTH THREADLOCKER	NOT SHOWN
4	4	675-1345-10	SCREW, M5-0.8 X 12MM, HEX FLANGE	
5	6	675-1351-10	SCREW, M5-0.8 X 12MM, BUTTON HEAD	
6	1	910-4024-10	ESI2 ELECTRIC STEERING WHEEL	

Install #5

AGCO MFWD Tractors

ESi² wheel successfully installed



Install #6

AGCO MFWD Tractors

Remove the steering wheel center cap and the nut holding the steering wheel onto the shaft.

SAVE the nut as it will be used later in this installation.

Following the manufacturer's recommended procedure remove the steering wheel.

NOTE: Consult your equipment dealer if you are unsure of the correct procedure for removing the steering wheel.

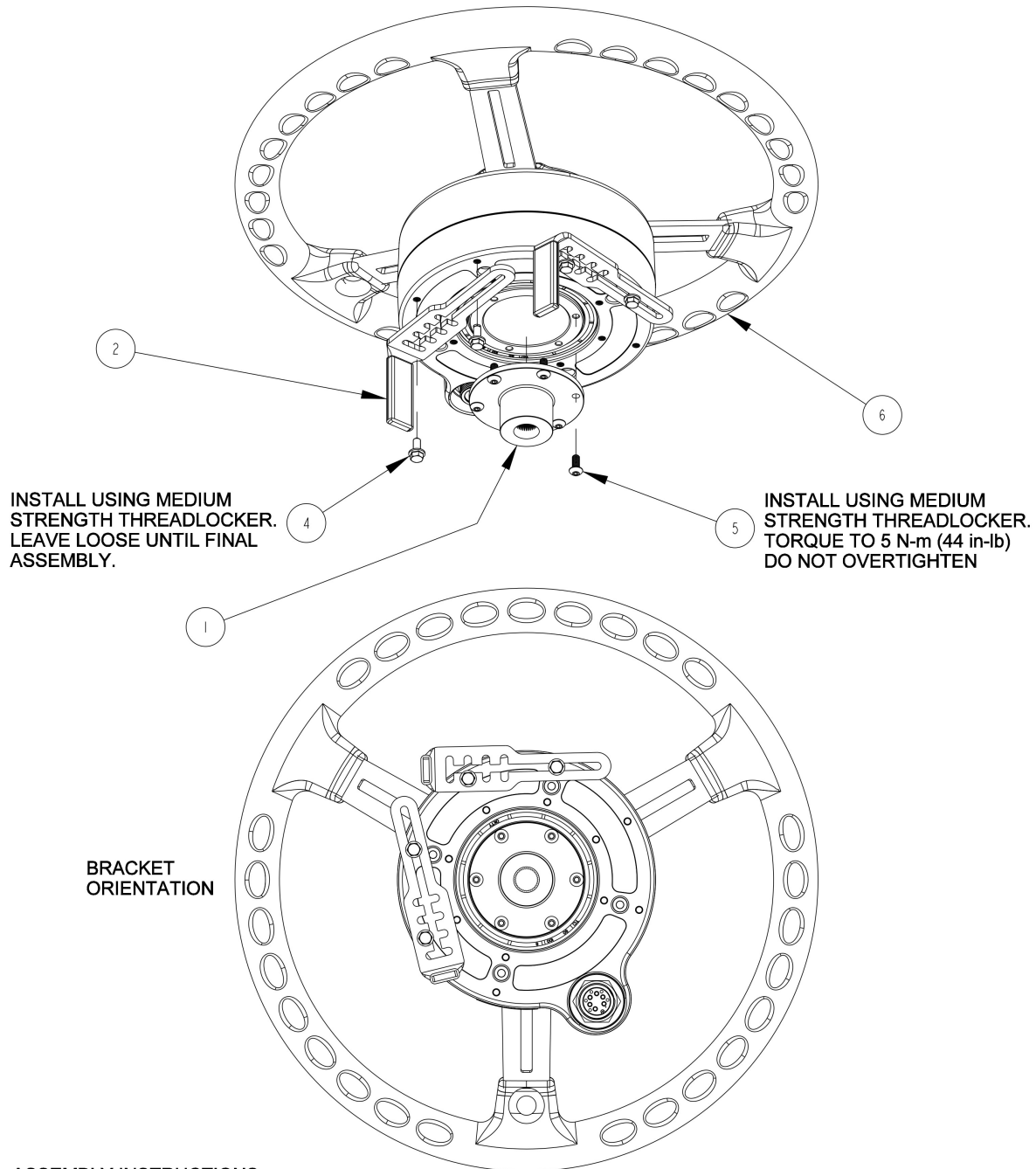


Steering column is ready for ESi² installation.



Install #6

AGCO MFWD Tractors

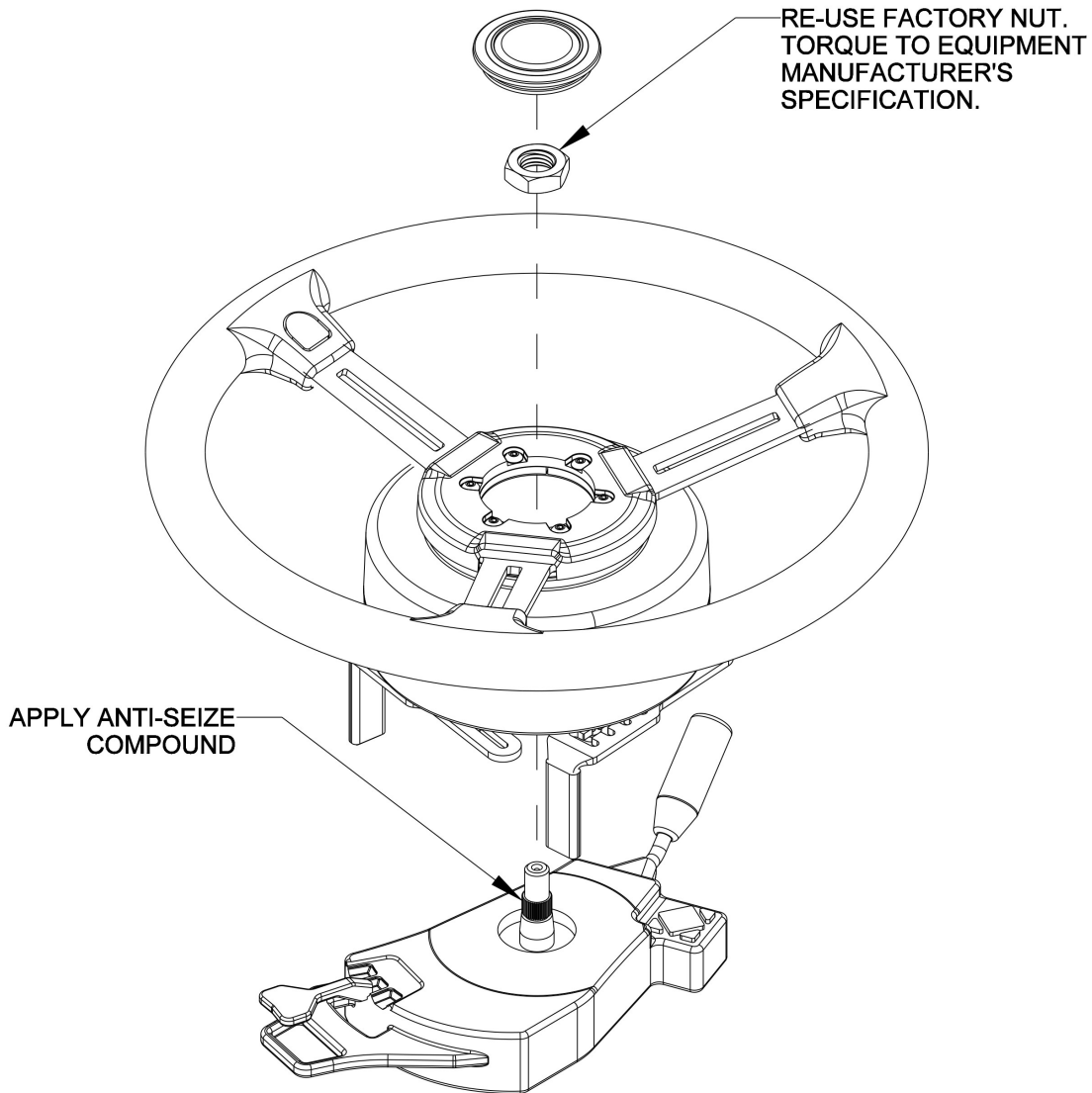


ASSEMBLY INSTRUCTIONS:

1. PRE-ASSEMBLE SPLINE ADAPTER AND BRACKETS TO WHEEL MOTOR.
2. PLACE ASSEMBLY ON STEERING SHAFT AND RE-INSTALL STEERING SHAFT NUT.
3. ADJUST BRACKETS TO FIT SNUG AGAINST THE STEERING COLUMN.
4. TIGHTEN SCREWS ATTACHING BRACKETS TO BOTTOM OF MOTOR. TORQUE TO 5 N-m (44 in-lb). DO NOT OVERTIGHTEN. ENSURE THAT THE ANTI-ROTATION BRACKETS DO NOT CONTACT THE SPLINE ADAPTER. ENSURE THAT THE MOTOR DOES NOT MOVE IN RELATION TO THE STEERING COLUMN.
5. ROTATE THE WHEEL A FULL TURN TO ENSURE THERE IS NO INTERFERENCE BETWEEN THE BRACKETS AND SPLINE ADAPTER, OR ANY MOVING PARTS AND MACHINE CONTROLS.

Install #6

AGCO MFWD Tractors



ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	604-0071-10	SPLINE ADAPTER- ESI2, 36T x .630 MAJOR x 1.200 OFFSET	
2	2	640-0184-01	ANTI-ROTATION BRACKET	
3	1	675-0126-000	LOCTITE 242 MEDIUM STRENGTH THREADLOCKER	NOT SHOWN
4	4	675-1345-10	SCREW, M5-0.8 X 12MM, HEX FLANGE	
5	6	675-1351-10	SCREW, M5-0.8 X 12MM, BUTTON HEAD	
6	1	910-4024-10	ESI2 ELECTRIC STEERING WHEEL	

Install #6

AGCO MFWD Tractors

ESi² wheel successfully installed



Install Completion Checklist

- Ensure steering wheel turns freely and anti-rotation brackets do not contact the spline adapter.
- Check, and if needed, tighten anti-rotation brackets to eliminate excess movement. Loose anti-rotation brackets can cause poor steering performance.
- For steering ECU installation instructions please refer to the ECU installation guide that came with your installation kit.