



INSTALLATION INSTRUCTIONS

90359768

JOYSTICK STEERING KIT WITH SECONDARY ELECTRICAL STEERING

APPROXIMATE INSTALLATION TIME: 4.0 hours

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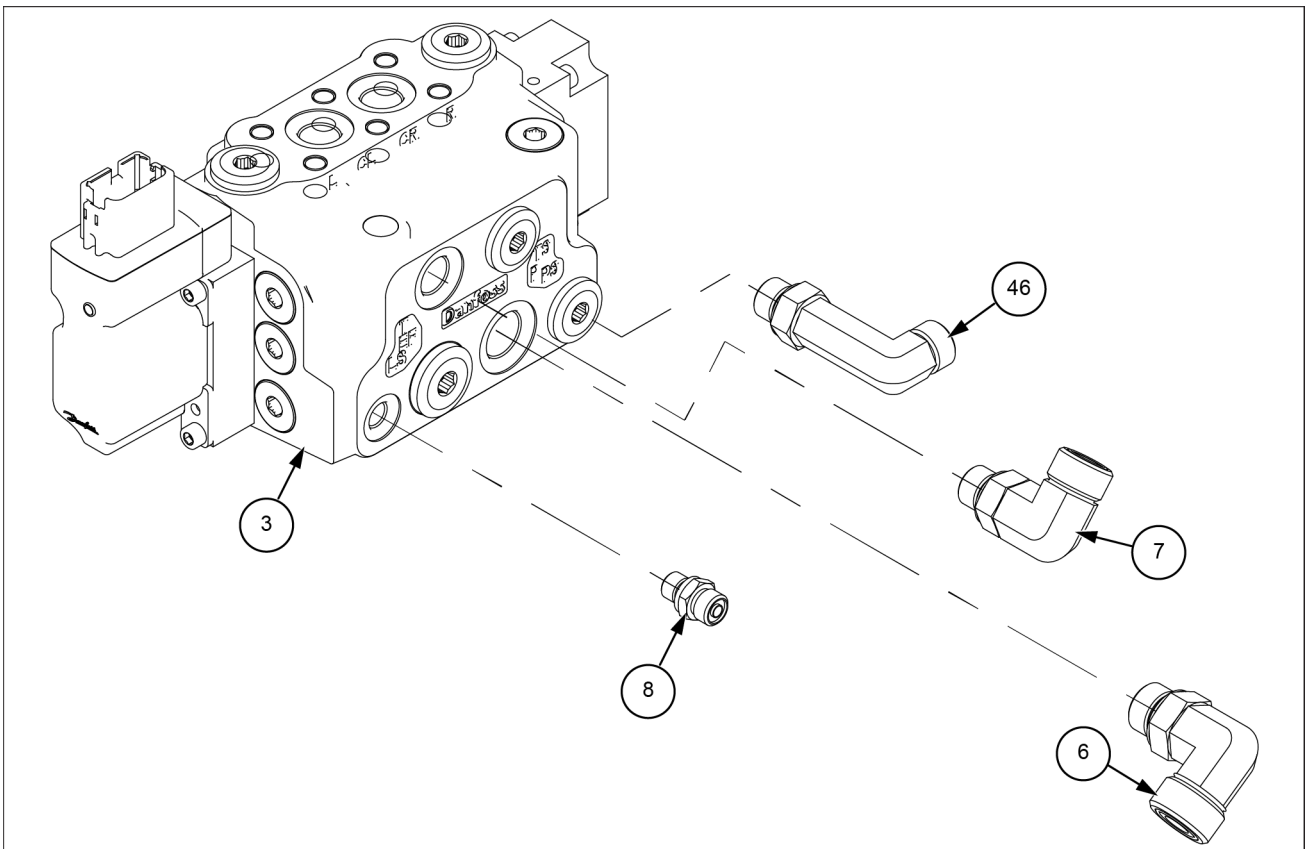
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5 - ASSEMBLY

Install

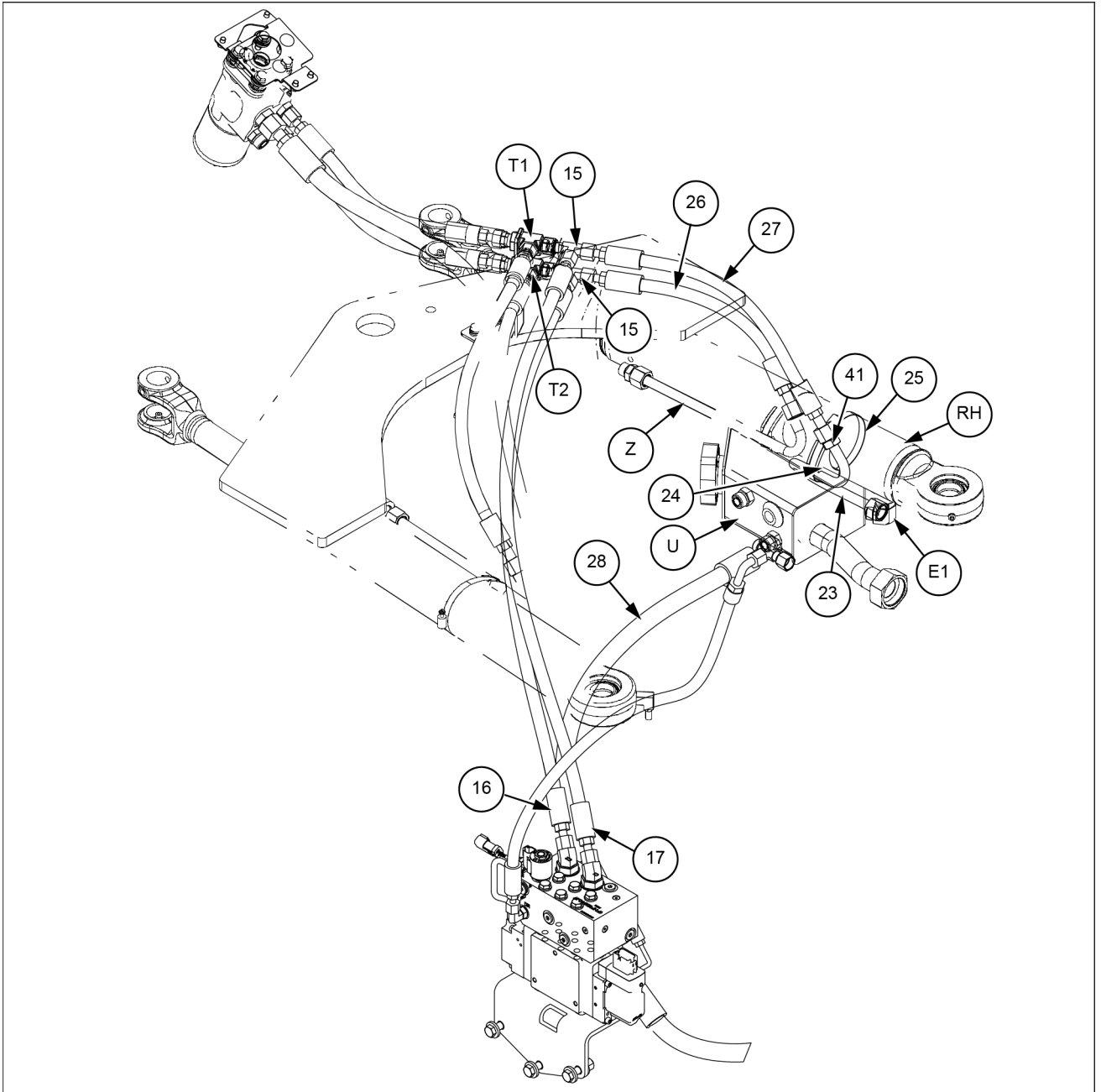
Joystick steering

1. Install the straight connector (8) on the LS port of the steering EHPS valve (3).
2. Install the 90° elbow (7) on the T port of the steering EHPS valve (3).
3. Install the 90° elbow (6) on the P port of the steering EHPS valve (3).
4. Install the 90° long elbow (46) on the PS port of the steering EHPS valve (3).



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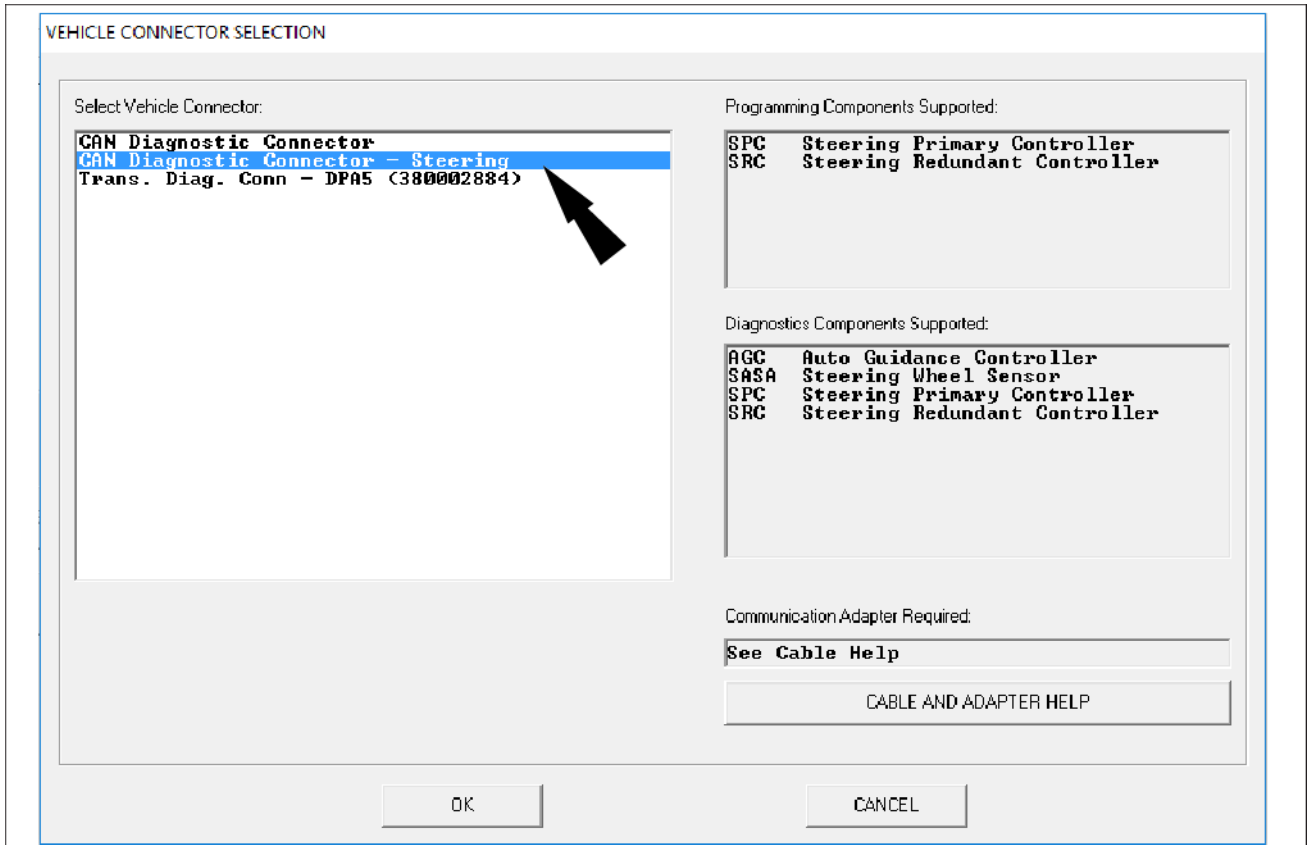
5 - ASSEMBLY



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NOTE: verify before the next operations that the transmission switch is in **NEUTRAL** position and check that the parking brake is applied.

3. Pick CAN Diagnostic Connector - Steering, click OK.



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14. To confirm, select "SEND MODIFIED VALUES TO CONTROLLERS" to update the machine with the new values.

Electronic Service Tool - Case - Wheel Loaders (Models 521G, 621G, 721G, 821G, 921G, 1021G, 1121G) (Tier 4B / Tier 2)

File Tool View Communications Options Window Help

MACHINE CONFIGURATIONS

SET UP CONTROLLERS

RETRIEVE CONTROLLERS VALUES

SEND MODIFIED VALUES TO CONTROLLERS

STATUS: **READY TO SEND**

REFERENCE	PARAMETER DESCRIPTION	CURRENT VALUES	MODIFIED VALUES
01	Brand	Case	Case
02	Vehicle Model	721G	721G
03	Launch Gear	2	2
04	Linkage Type	Z-Bar	Z-Bar
05	Hydraulics Type	Electro-Hydraulic	Electro-Hydraulic
06	Tire Size	Special	Special
07	Set Tire Circumference (cm)	349	349
08	Aux 1 Hydraulics	Installed	Installed
09	Aux 2 Hydraulics	Installed	Installed
10	Grid Heater	Installed	Installed
11	Joystick Steering Enable	Installed	Installed
12	Auto Ride Control	Installed	Installed

SAVE DATA TO FILE

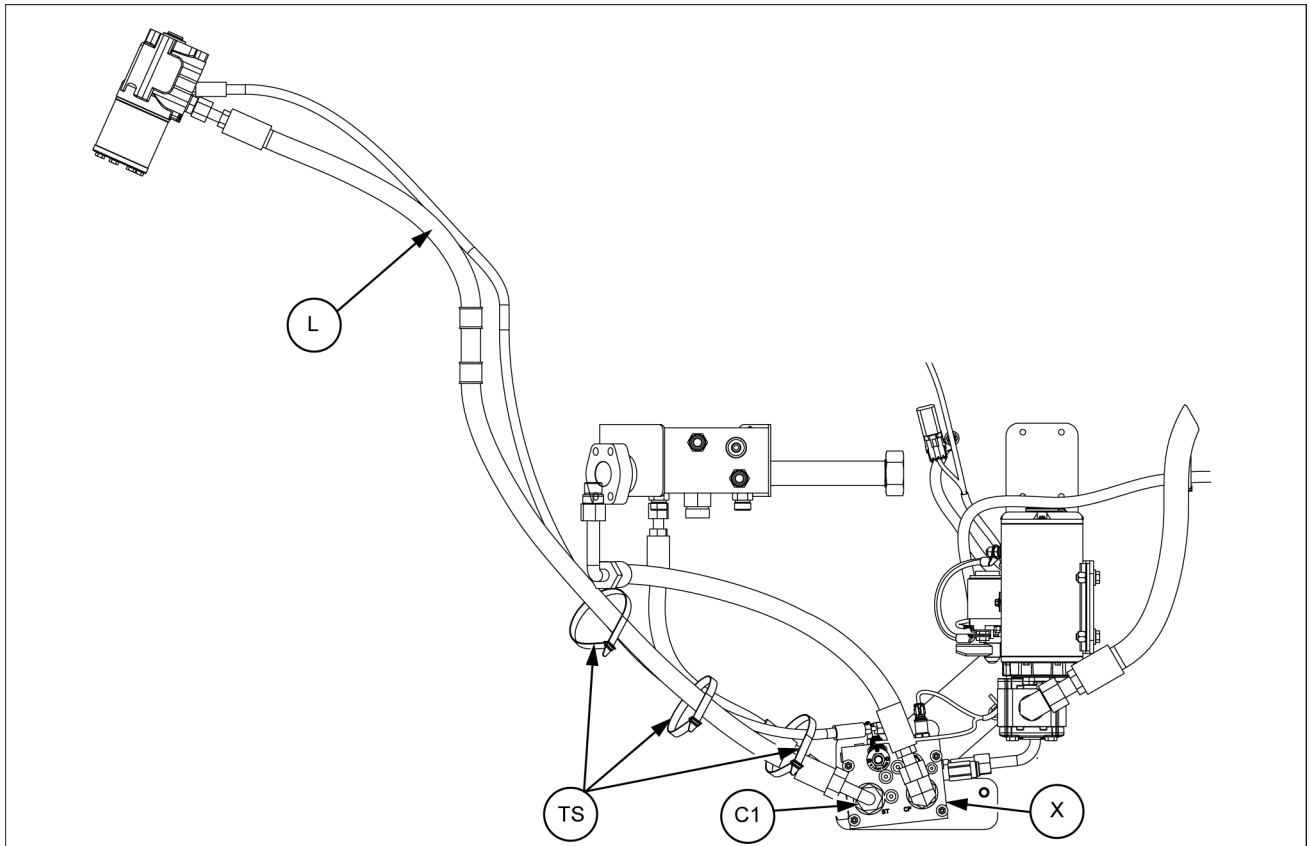
EXIT

LEIL17WHL0435FB 14

15. Select "EXIT" to return to the main menu, follow prompts.
16. Disconnect the EST from Diagnostic Connector.
17. Turn the key switch to "OFF" position.

NOTE: wait 5 seconds before the next turn of the key switch to "ON" position.

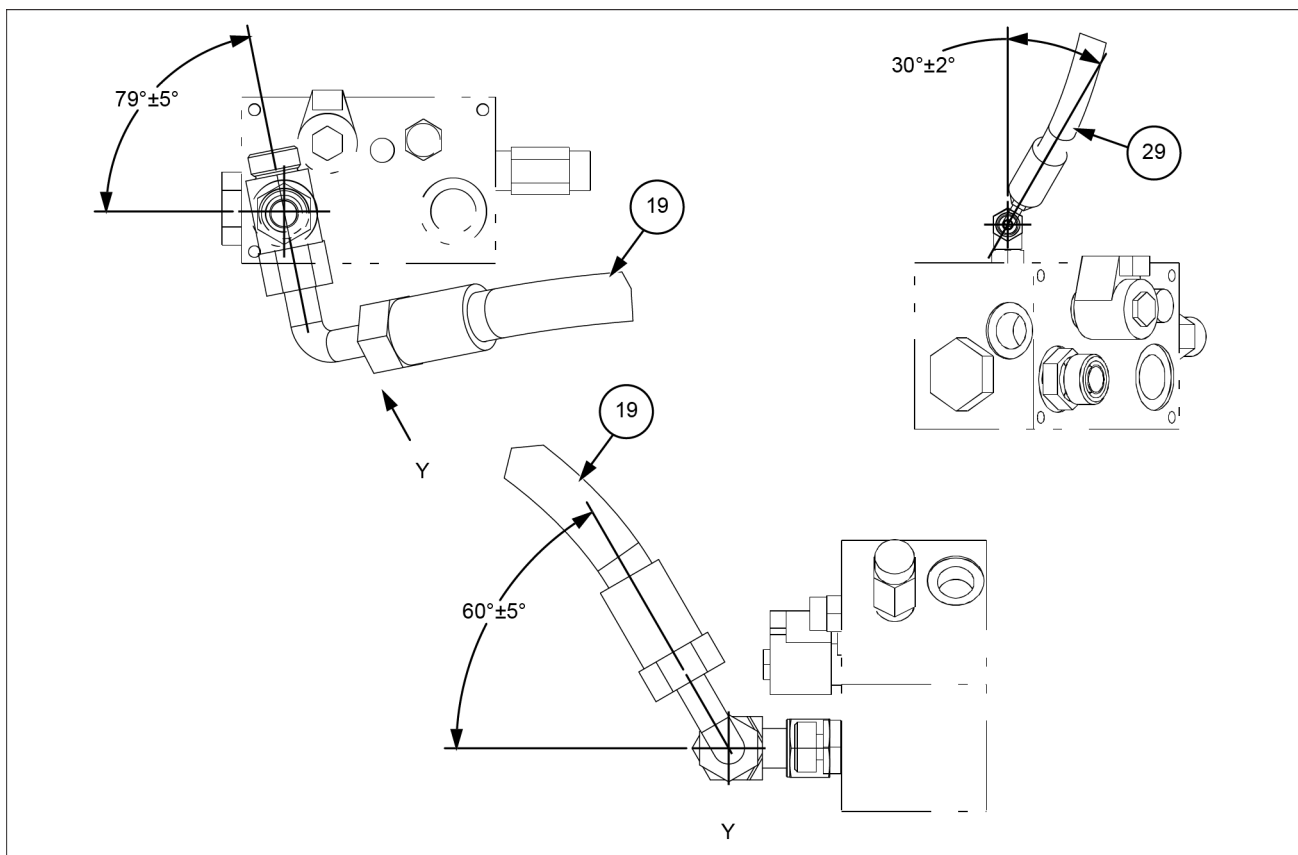
3. Débrancher le flexible de pression (**L**) du connecteur (**C1**) posé sur l'orifice « ST » de la vanne de direction auxiliaire (**X**).
4. À partir de l'orifice LS ST de la vanne de priorité (**V**), déposer le flexible de détection de charge (**D**) et le connecteur (**C**), puis déposer de l'orifice LS de la vanne de direction auxiliaire (**X**), le flexible (**D**) et le coude à 90° (**E**).



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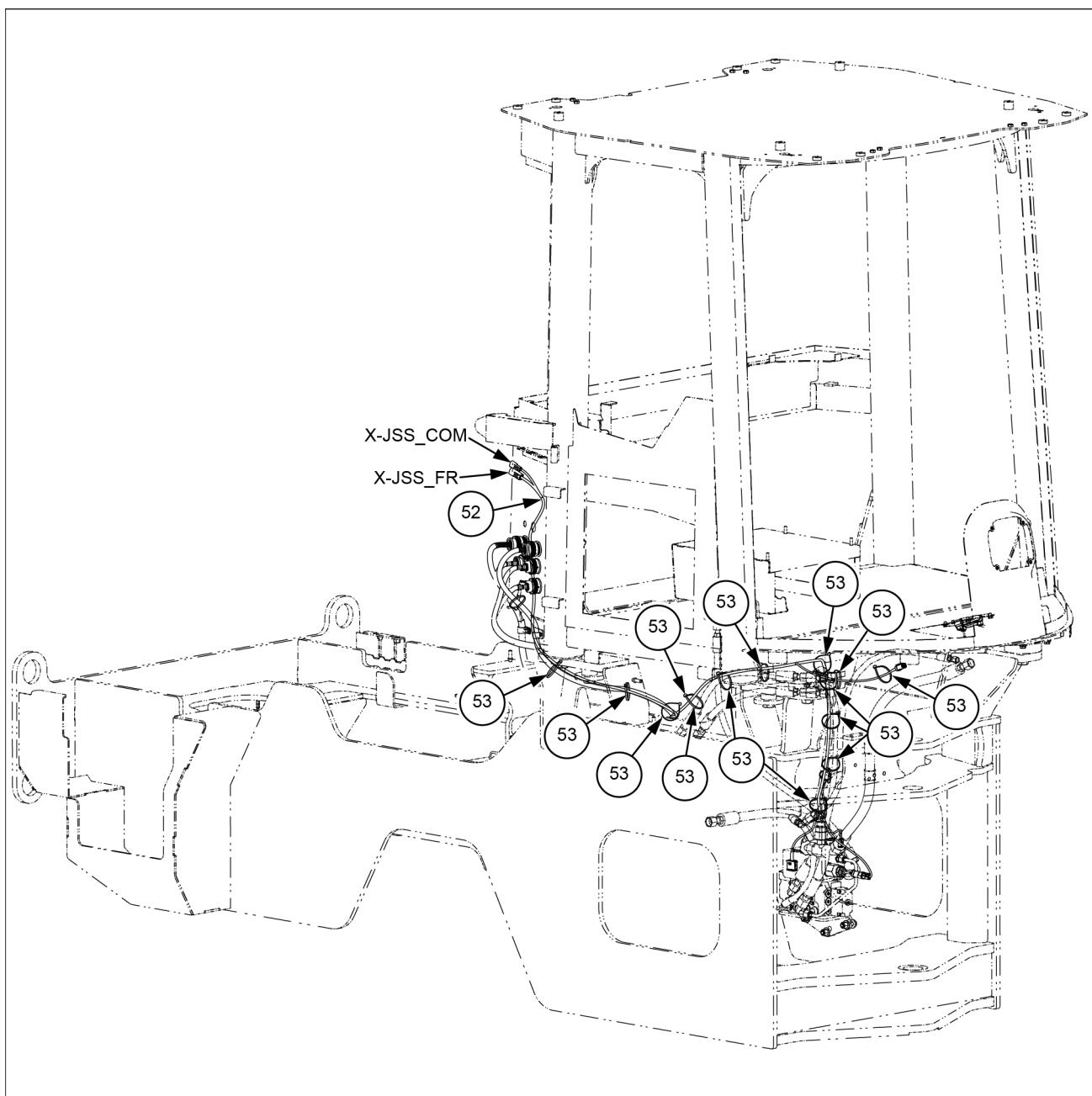
5. Localiser la zone du vérin de direction de droite et déposer le collier de serrage du flexible (**H**) et le bloc (**G**).
6. Débrancher et déposer le flexible (**B**) du raccord en T (**T1**) et puis déposer le tuyau de tête (**I**) et le joint torique (**R**) du vérin de direction de droite (**RH**).
7. Débrancher et déposer le flexible (**A**) le raccord en T (**T2**) puis du tube cylindrique droit (**Z**).
8. Jeter les flexibles (**A**) et (**B**), le tuyau (**I**), le collier du flexible (**H**), le bloc (**G**), et le joint torique (**R**).
9. Sous le compartiment de la cabine, desserrer et déposer les quatre écrous de fixation et dégager la vanne orbitrol (**S**) de l'arbre de direction (**SC**).
10. Déposer les quatre boulons (**Q**), les rondelles de blocage (**P**), les douilles de montage en acier (**O**), et les douilles en caoutchouc (**N**) pour détacher le support (**BR**) de la vanne orbitrol (**S**).
11. Déposer l'isolateur de direction (**M**).
Jeter les quatre boulons (**Q**), les rondelles de blocage (**P**), les douilles en acier (**O**), les douilles en caoutchouc (**N**), l'isolateur de direction (**M**).

27. Orienter les flexibles (19) et (29) selon l'angle correct, comme illustré dans la figure 10.



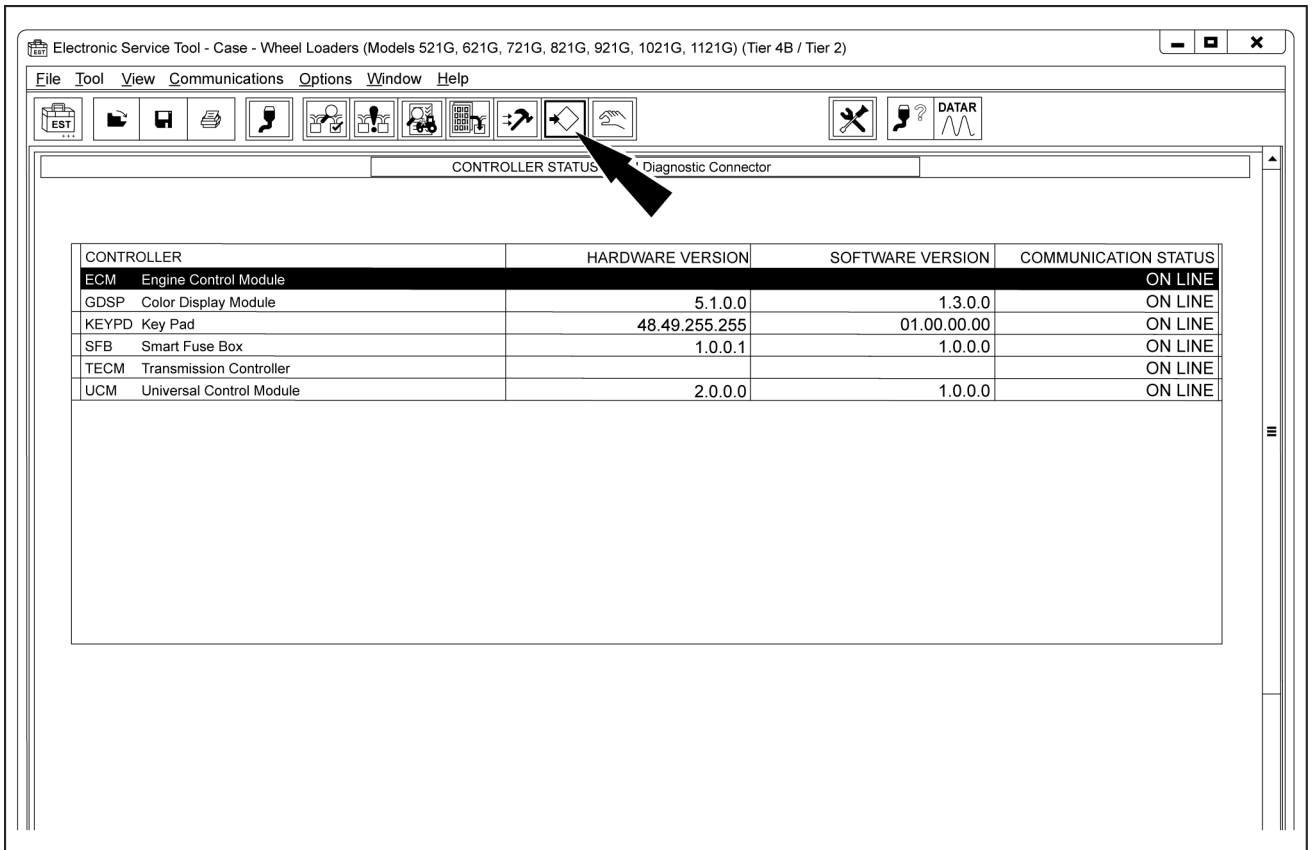
LEIL20WHL1654FB 10

3. Retirer la terminaison CAN raccordée au X-JSS_CAN et le mettre au rebut.
4. Brancher le connecteur du faisceau X-JSS_FR au faisceau de cabine (X-CAB_JSS).
5. Brancher le connecteur du faisceau X-JSS_COM au faisceau de cabine (X-JSS_CAN).
6. Fixer le faisceau électrique (52) avec les attaches de câble (53).



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11. Sélectionner « Configuration ».



Electronic Service Tool - Case - Wheel Loaders (Models 521G, 621G, 721G, 821G, 921G, 1021G, 1121G) (Tier 4B / Tier 2)

File Tool View Communications Options Window Help

CONTROLLER STATUS Diagnostic Connector

CONTROLLER	HARDWARE VERSION	SOFTWARE VERSION	COMMUNICATION STATUS
ECM Engine Control Module			ON LINE
GDSP Color Display Module	5.1.0.0	1.3.0.0	ON LINE
KEYPD Key Pad	48.49.255.255	01.00.00.00	ON LINE
SFB Smart Fuse Box	1.0.0.1	1.0.0.0	ON LINE
TECM Transmission Controller			ON LINE
UCM Universal Control Module	2.0.0.0	1.0.0.0	ON LINE

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2 - SATZINHALT

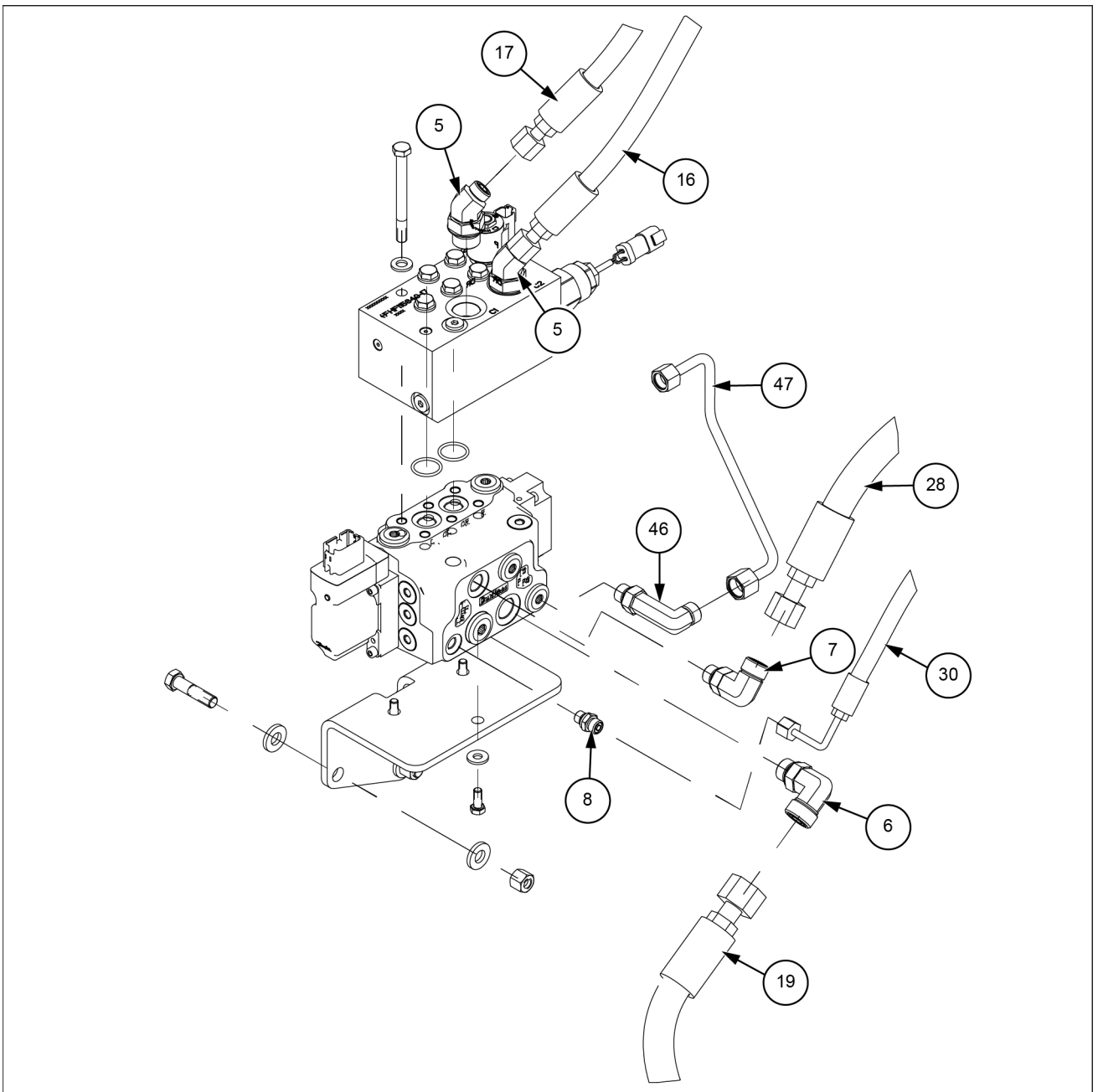
Übersicht Montagesatz

HINWEIS: Die Teilenummern der Artikel in diesem Satz können dem Teilekatalog entnommen werden.

HINWEIS: in der folgenden Tabelle sind die Teile aufgeführt und wie in der Montageanleitung nummeriert.

Pos.	Beschreibung	Menge
2	JSS Ventilmontagehalterung	1
3	Lenkventil EHPS	1
4	JSS Absperrventil	1
5	45°-Winkelstück -8 ORFS x M27 x 2 ORB	2
6	90°-Winkelstück -12 ORFS x M22 x 1.5 ORB	1
7	90°-Winkelstück -10 ORFS x M18 x 1.5 ORB	1
8	Gerade Verschraubung -4 ORFS x M12 x 1.5 ORB	1
9	Gerade Verschraubung -6 ORFS x M14 x 1.5 ORB	2
10	T-Wechselventil	1
11	90°-Winkelstück ORFS M - ORFS	1
12	45°-Winkelstück 10MM ORFS-ORFS	1
13	Unterlegscheibe 9x21x2.5	3
14	Schraube M8x20	3
15	T-Stück ORFS 12MM	3
16	Schlauch (zum Zylinder) 1054 mm (41.5 in)	1
17	Schlauch (zum Zylinder) 1128 mm (44.4 in)	1
18	T-Stück ORFS 20MM	1
19	JSS Druckschlauch 923 mm (36.3 in)	1
20	Unterlegscheibe 13.5x28x4	6
21	Mutter M12	3
22	Schraube M12x50	3
23	Rechter Lenkzylinderkopf Rohr 36.2 mm (1.4 in)	1
24	Klemmblock	1
25	Rohrklemme	1
26	Stabschlauch rechts 435 mm (17.1 in)	1
27	Basisschlauch rechts 545 mm (21.4 in)	1
28	Schlauch (zum Tank) 894 mm (35.2 in)	1
29	Lastmess-Schlauch Lenkung 805 mm (31.7 in)	1
30	JSS Lastmessschlauch 922 mm (36.3 in)	1
31	JSS Halterung des Joysticklenkungssensors	1
32	Unterlegscheibe 9x16x1.6	7
33	Schraube M8x10	4
34	Lenkwinkelsensor	1
35	Mutter M10	3
36	Lenkpumpenisolator	1
37	Gummibuchse	4
38	Stahlbuchse	4
39	Sicherungsscheibe M10x22	4
40	Schraube M10x30	4
41	O-Ring	1
42	Unterlegscheibe 11x21x2.5	6
43	Schraube M10x105	6
44	90°-Winkelstück -6 ORFS x M14 x 1.5 ORB	1
45	Schlauch (zwischen Absperrventil und Tank) 965 mm (38 in)	1
46	90°-Winkelstück -8 ORFS x M18 x 1.5 ORB	1
47	Rohr der Joysticklenkung 203.1 mm (8 in)	1
48	Stopfen	2
49	Unterlegscheibe 10.6x25x6	2

10. Schließen Sie den JSS-Lastmessschlauch (30) an den geraden Steckverbinder (8) an.
11. Montieren Sie den JSS-Druckschlauch (19) am 90°-Winkelstück (6).
12. Montieren Sie den Schlauch (zum Tank) (28) am 90°-Winkelstück (7).
13. Montieren Sie das Rohr (47) der Joysticklenkung an dem langen 90°-Winkelstück (46).
14. Montieren Sie den Schlauch (16) am 45°-Winkelstück (5).
15. Montieren Sie den Schlauch (17) am 45°-Winkelstück (5).



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41. Den geraden Steckverbinder **(9)** am JSS-Absperrventil **(4)** anbringen.
42. Montieren Sie das Rohr **(47)** der Joysticklenkung an dem geraden Steckverbinder **(9)**.
43. Das **90°**-Winkelstück **(44)** an den Anschluss DR des JSS-Abschaltventils **(4)** montieren.
44. Montieren Sie das T-Stück **(15)** auf dem Kühlrahmen **(CF)**.
45. Montieren Sie den Schlauch (Rücklauf zum Tank) **(RB)** am T-Stück **(15)**.
46. Montieren Sie den Schlauch (Absperrventil zum Tank) **(45)** am **90°**-Winkelstück **(44)** und am T-Stück **(15)**.

HINWEIS: Bei dem Schlauch **(45)** auf die korrekte Winkel-
ausrichtung achten, wie in der Abbildung **14** dargestellt.

47. Montieren Sie die Stopfen **(48)** an dem JSS-Abschaltventil **(4)**.

4. Das Hauptsteuergerät und das Sicherheitssteuergerät sollen On Line sein.
Wählen Sie das Konfigurationssymbol.

Electronic Service Tool - Case - Wheel Loaders (Models 512G, 621G, 721G, 821G, 921G, 1021G, 1121G) (Tier 4B / Tier 2)

File Tool View Communications Options Utilities Window Help

CONTROLLER STATUS - CAN Diagnostic Connector - Steering

CONTROLLER	SOFTWARE VERSION	COMMUNICATION STATUS
JOY Primary Implement Joystick		ON LINE
MC Main Controller	APP_CLS_M_R197_SEHS ----_11153340_-B04	ON LINE
SASA Steering Wheel Sensor		ON LINE
SC Safety Controller	APP_CLS_S_R197_SEHS ----_11153341_-B04	ON LINE

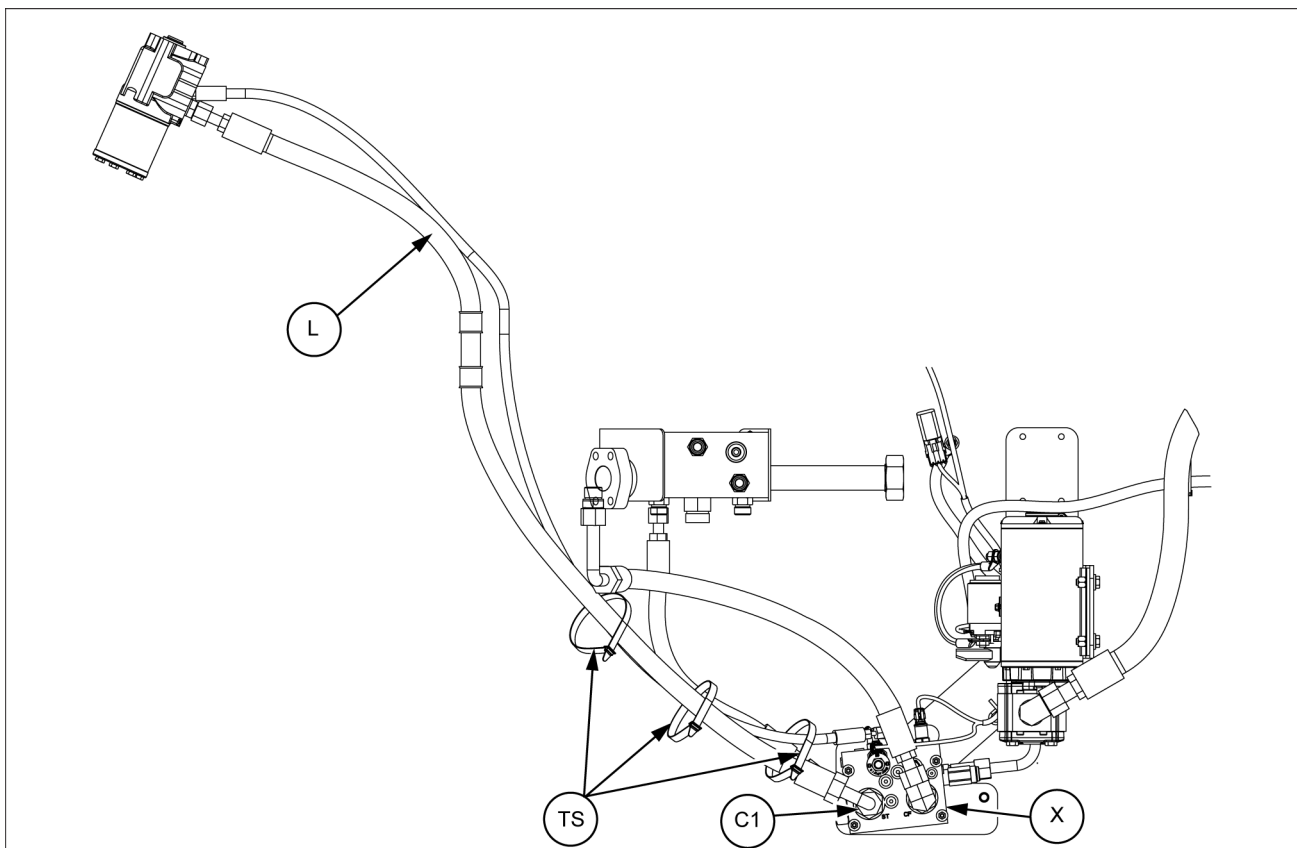
RETRIEVE VERSION INFORMATION FOR THE SELECTED CONTROLLER

RETRIEVE VERSION INFORMATION FROM ALL CONTROLLERS

Activate Configuration Window

CAN 2 Comm Link Up 11:13:10 AM

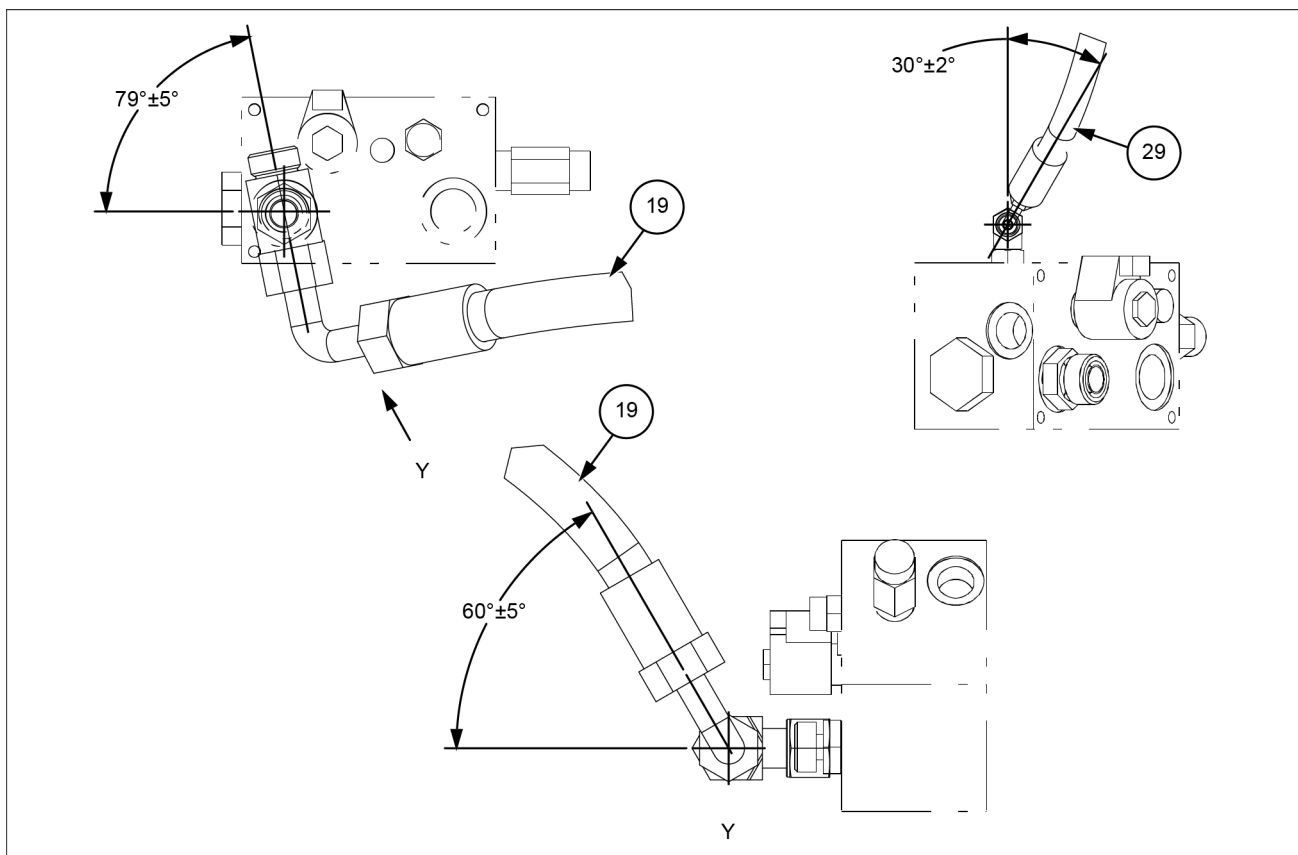
3. Scollegare il tubo flessibile di pressione (**L**) del connettore (**C1**) installato nell'attacco "ST" della valvola di sterzo ausiliare (**X**).
4. Dall'attacco LS ST della valvola prioritaria (**V**) rimuovere il tubo flessibile di rilevamento carico (**D**) e il connettore (**C**), quindi rimuovere dall'attacco LS della valvola di sterzo ausiliario (**X**), il tubo flessibile (**D**) e il gomito a 90° (**E**).



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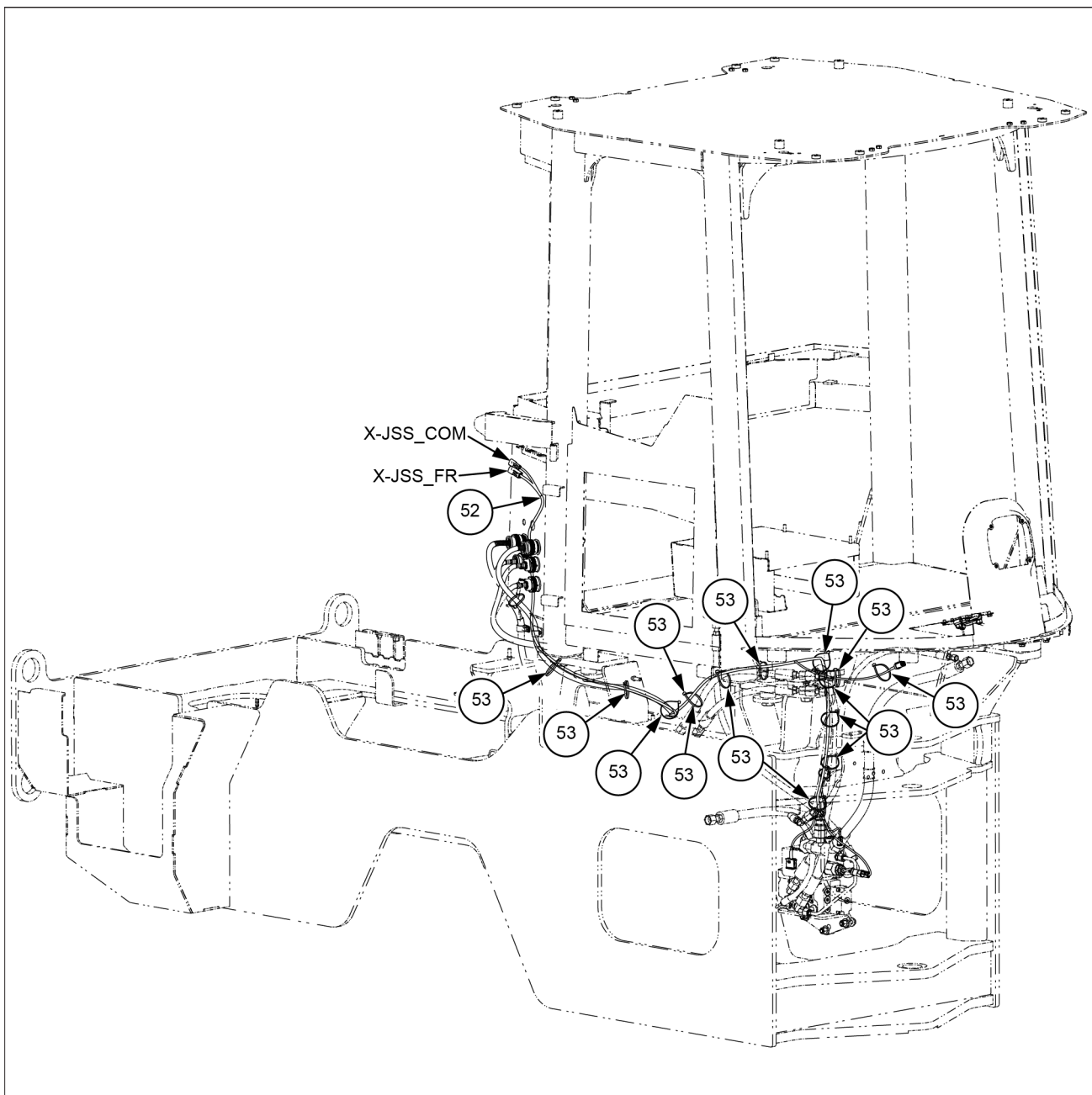
5. Individuare la zona del cilindro dello sterzo lato destro e rimuovere la fascetta stringitubo (**H**) e il gruppo (**G**).
6. Scollegare e rimuovere il tubo flessibile (**B**) dal giunto a T (**T1**) e quindi rimuovere il tubo sterzo (**I**) e l'O-ring (**R**) dal cilindro dello sterzo lato destro (**RH**).
7. Scollegare e rimuovere il tubo flessibile (**A**), dal giunto a T (**T2**), quindi dal tubo del cilindro lato destro (**Z**).
8. Gettare i tubi flessibili (**A**) e (**B**), il tubo (**I**), la fascetta stringitubo (**H**), il gruppo (**G**) e l'O-ring (**R**).
9. Sotto l'abitacolo, allentare e rimuovere i quattro dadi di fissaggio e sganciare la valvola Orbitrol (**S**) dall'albero dello sterzo (**SC**).
10. Rimuovere i quattro bulloni (**Q**), le rondelle di bloccaggio (**P**), le boccole di montaggio in acciaio (**O**) e le boccole gommate (**N**) per staccare la staffa (**BR**) dalla valvola Orbitrol (**S**).
11. Rimuovere l'isolatore dello sterzo (**M**).
Gettare i quattro bulloni (**Q**), le rondelle di bloccaggio (**P**), le boccole in acciaio (**O**), le boccole gommate (**N**) e l'isolatore dello sterzo (**M**).

27. Applicare ai tubi flessibili (19) e (29) il giusto orientamento angolare come indicato nella figura 10.



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3. Rimuovere il terminatore CAN esistente da X-JSS_CAN e gettarlo.
4. Collegare il connettore del cablaggio X-JSS_FR al cablaggio della cabina (X-CAB_JSS).
5. Collegare il connettore del cablaggio X-JSS_COM al cablaggio della cabina (X-JSS_CAN).
6. Fissare il cablaggio (52) con le fascette serrafili (53).



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11. Selezionare Configurazione.

Electronic Service Tool - Case - Wheel Loaders (Models 521G, 621G, 721G, 821G, 921G, 1021G, 1121G) (Tier 4B / Tier 2)

File Tool View Communications Options Window Help

CONTROLLER STATUS Diagnostic Connector

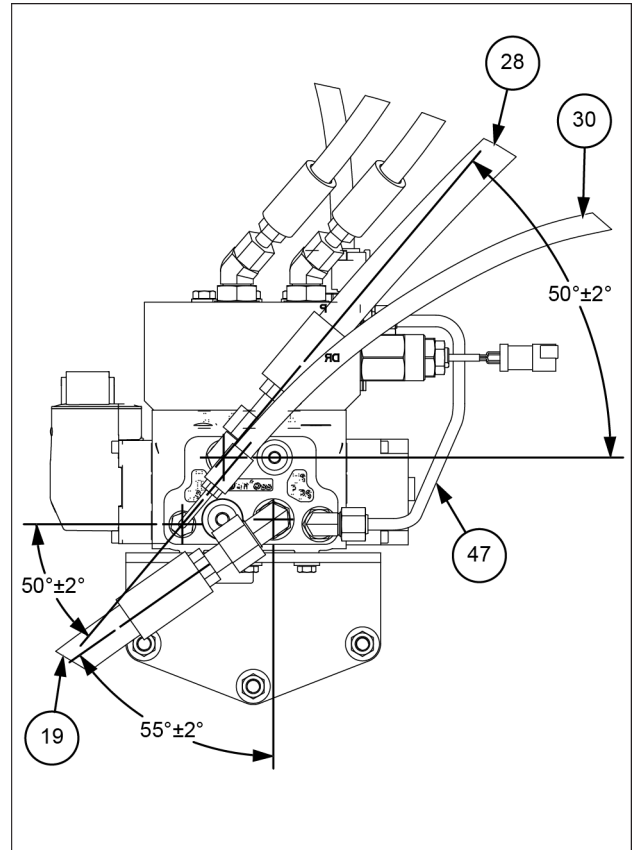
CONTROLLER	HARDWARE VERSION	SOFTWARE VERSION	COMMUNICATION STATUS
ECM Engine Control Module			ON LINE
GDSP Color Display Module	5.1.0.0	1.3.0.0	ON LINE
KEYPD Key Pad	48.49.255.255	01.00.00.00	ON LINE
SFB Smart Fuse Box	1.0.0.1	1.0.0.0	ON LINE
TECM Transmission Controller			ON LINE
UCM Universal Control Module	2.0.0.0	1.0.0.0	ON LINE

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2 - CONTENIDO DEL KIT

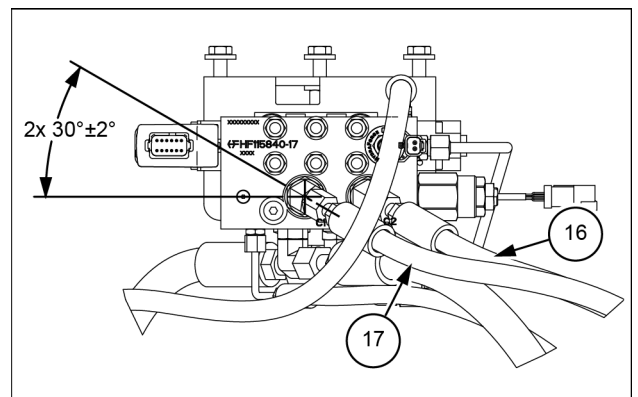
48	Tapón	2
49	Arandela 10.6x25x6	2
50	Reposabrazos Milsco	1
51	Soporte del reposabrazos Grammer	1
52	Mazo de cables del bastidor del joystick	1
53	Brida	14
54	Etiqueta de precaución	1
55	Fusible de 5 A	1
56	Perno M8x20	3
57	Tornillo	4

16. Incline las mangueras (30), (19), (28) y el tubo (47) en el ángulo correcto tal como se muestra en la figura 5.

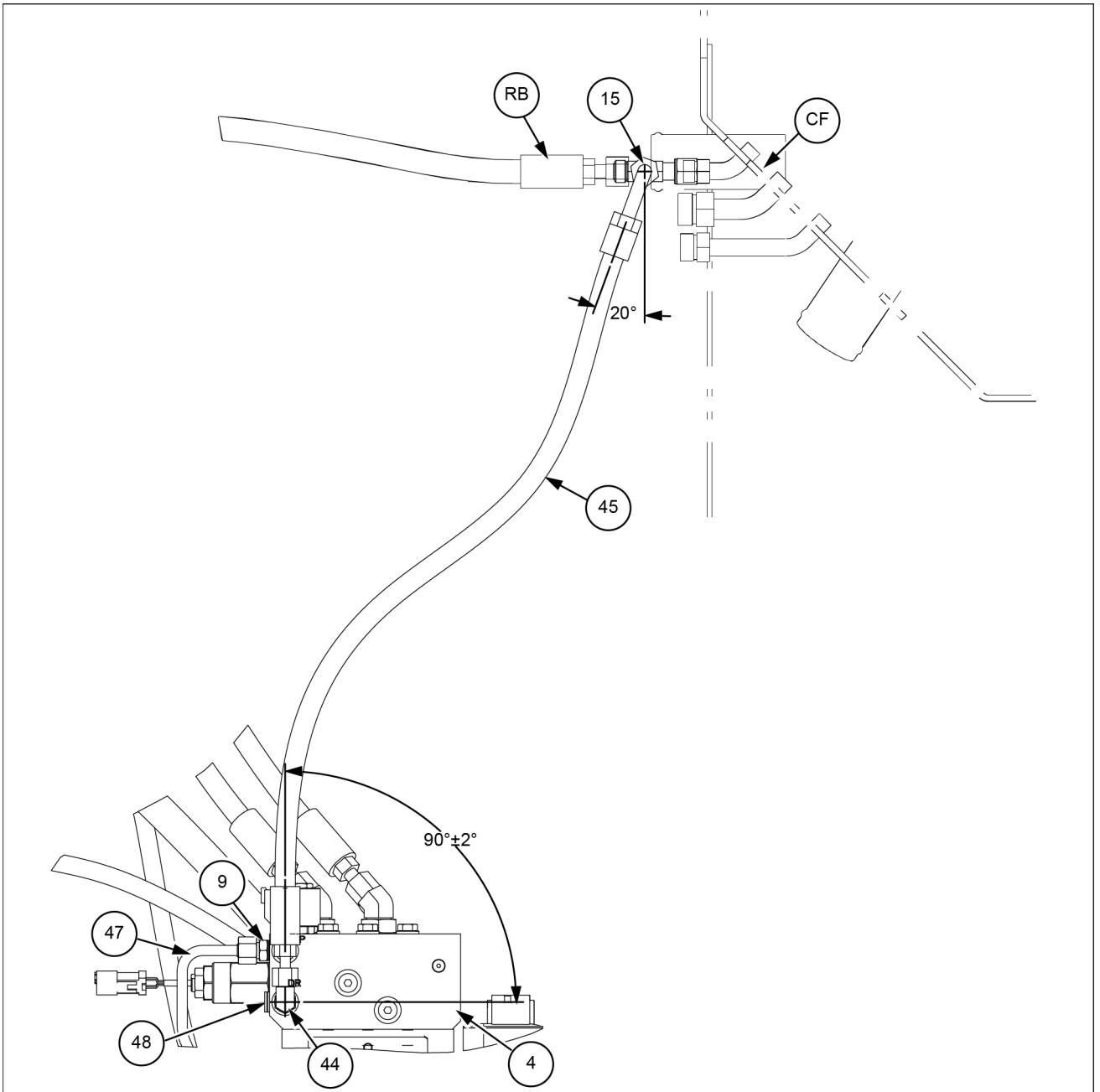


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17. Incline las mangueras (16) y (17) en el ángulo correcto tal como se muestra en la figura 6.



LEIL20WHL1650AB 6



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Configuraciones de la válvula de corte (COV) JSS G-Series

6. Compruebe el hardware JSS de la máquina y confirme si dispone de una COV en configuración dual o sencilla. Las Figuras 1 y 2 muestran una COV en configuración dual. Las Figuras 3 y 4 muestran una COV en configuración sencilla. Seleccione el modelo correcto y la configuración de la COV en «VEHICLE GEOMETRY SELECTION LIST», pulse el botón «SET AST VEHICLE GEOMETRY» para guardar.
7. Si los códigos de error «520198-05: Cutoff Supply, Open Circuit» o «520208-31 Controller forced to safe state by peer controller via SPI» aparecen tras configurar la dirección avanzada, es posible que se haya seleccionado la configuración de datos de la COV errónea en «VEHICLE GEOMETRY SELECTION LIST».
8. Se ha implementado el diseño sencillo de COV tras S/N (XXXXXXXXXX). El S/N es una guía, no una regla absoluta con la que actualizar vehículos antiguos.

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