TL 6035
MASTER PARTS MANUAL REV. 07/00-5

Machine Serial No. _________________________

The information and illustrations in this manual have been approved as accurate at the time of printing. However, the manual may contain information on options not present on your machine. ARDCO/Traverse Lift L.L.C. reserves the right to make changes and improvements in its product at anytime without notice or obligation.
This manual contains all the information and illustrations that were available for this
machine at the time of publication. ARDCO/Traverse Lift, L.L.C. reserves the right to
make changes and improvements in its product at anytime without notice or obligation.

Manuals are updated as new material becomes available. If your machine has features
that are not listed in this manual, contact Technical Publications or Engineering at
ARDCO/Traverse Lift, L.L.C. (713-433-6751) to check whether revisions to the manual
are available and to request any updated sections.

ARDCO/Traverse Lift’s Service Department is also available to assist with technical
questions regarding this machine.
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### AXLE GROUP - FRONT-CUC SERIES

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TL-100</td>
<td>AXLE, FRONT (LPP00248)</td>
</tr>
<tr>
<td>TL-100A</td>
<td>AXLE, FRONT, BOX &amp; COVERS</td>
</tr>
<tr>
<td>TL-100B</td>
<td>AXLE, FRONT, 45% L. SLIP DIFFERENTIAL</td>
</tr>
<tr>
<td>TL-100C</td>
<td>AXLE, FRONT, HUB REDUCTION R=6.23</td>
</tr>
<tr>
<td>TL-100D</td>
<td>AXLE, FRONT, 10 DISCS BRAKE</td>
</tr>
<tr>
<td>TL-100E</td>
<td>AXLE, FRONT, INTEGRATED CYLINDER</td>
</tr>
<tr>
<td>TL-100F</td>
<td>AXLE, FRONT, OSCILLATING SUPPORT</td>
</tr>
</tbody>
</table>

### AXLE GROUP - FRONT-CCC SERIES

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TL-319</td>
<td>AXLE, FRONT, BOX AND COVERS</td>
</tr>
<tr>
<td>TL-320</td>
<td>AXLE, FRONT, DIFFERENTIAL, NO SPIN</td>
</tr>
<tr>
<td>TL-321</td>
<td>AXLE, FRONT, AXLE &amp; WHEEL HUB ASSEMBLY</td>
</tr>
<tr>
<td>TL-322</td>
<td>AXLE, FRONT, DISC SERVICE BRAKE</td>
</tr>
<tr>
<td>TL-323</td>
<td>AXLE, FRONT, PARK BRAKE</td>
</tr>
<tr>
<td>TL-324</td>
<td>AXLE, FRONT, TIE ROD</td>
</tr>
<tr>
<td>TL-325</td>
<td>AXLE, FRONT, OSCILLATING SUPPORT</td>
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### AXLE GROUP - REAR-CUC SERIES

<table>
<thead>
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<td>TL-101</td>
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<tr>
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<td>AXLE, REAR, BOX &amp; COVERS</td>
</tr>
<tr>
<td>TL-101B</td>
<td>AXLE, REAR, DIFFERENTIAL W/O BLOCK</td>
</tr>
<tr>
<td>TL-101C</td>
<td>AXLE, REAR, HUB REDUCTION R=6.23</td>
</tr>
<tr>
<td>TL-101D</td>
<td>AXLE, REAR, 10 DISCS BRAKE</td>
</tr>
<tr>
<td>TL-101E</td>
<td>AXLE, REAR, INTEGRATED CYLINDER</td>
</tr>
<tr>
<td>TL-101F</td>
<td>AXLE, REAR, OSCILLATING SUPPORT</td>
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### AXLE GROUP - REAR-CCC SERIES

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<thead>
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<tr>
<td>TL-326</td>
<td>AXLE, REAR, BOX AND COVERS</td>
</tr>
<tr>
<td>TL-327</td>
<td>AXLE, REAR, DIFFERENTIAL</td>
</tr>
<tr>
<td>TL-328</td>
<td>AXLE, REAR, AXLE &amp; WHEEL HUB ASSEMBLY</td>
</tr>
<tr>
<td>TL-329</td>
<td>AXLE, REAR, DISC SERVICE BRAKE</td>
</tr>
<tr>
<td>TL-330</td>
<td>AXLE, REAR, TIE ROD</td>
</tr>
<tr>
<td>TL-331</td>
<td>AXLE, REAR, OSCILLATING SUPPORT</td>
</tr>
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### AXLE GROUP - CCD SERIES

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<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>TL-664025</td>
<td>ASSEMBLY, AXLE, DANA SPICER (NLP01527)</td>
</tr>
</tbody>
</table>

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| DECAL GROUP | TL-240, KIT, DECAL (APP00379) |
| DRIVELINE GROUP | TL-127, DRIVELINE ASSEMBLY |
| ENGINE GROUP | TL-243, AIR INTAKE ASSEMBLY (CUMMINS ENG.) |
| | TL-244, AIR INTAKE ASSEMBLY (JOHN DEERE ENG.) |
| | TL-207, ENGINE ACCESSORIES (CUMMINS ENG.) |
| | TL-246, ENGINE ACCESSORIES (JOHN DEERE ENG.) |
| | TL-245, EXHAUST ASSEMBLY (CUMMINS ENG.) |
| | TL-217, EXHAUST ASSEMBLY (JOHN DEERE ENG.) |
| | TL-123, RADIATOR ASSEMBLY (CUMMINS ENG.) |
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| | TL-051, CYLINDER, FRAME LEVELING (LPP27552) |
| | TL-084, CYLINDER, BOOM LIFT (LPP27773) |
| | TL-199, CYLINDER, BOOM EXTEND (APP00280) |
| | TL-115, CYLINDER, CARRIAGE TRANSFER (LPP00251) |
| | TL-116, CYLINDER, SLAVE (APP00279) |
| | TL-220, CYLINDER, FORK ROTATE (LPP20139 - OPTIONAL) |
| HYDRAULIC HOSING GROUP | TL-308, HYD. DIA. 19801-001, PARK BRAKE RETURN/SUCTION W/O/MANIFOLD, W/AUX. |
| | TL-309, HYD. DIA. 19801-002, WITH HYDRAULIC PARK BRAKE W/AUX. |
| | TL-310, HYD. DIA. 19801-003, W/HYD. PARK BRAKE STEERING / JOYSTICK W/AUX. |
| | TL-311, HYD. DIA. 19801-004, BOOM ASSEMBLY W/AUX. |
| | TL-312, HYD. DIA. 19801-005, W/HYD. PARK BRAKE RETURN/SUCTION W/O/MANIFOLD. |
| | TL-313, HYD. DIA. 19801-006, W/HYD. PARK BRAKE W/O/AUX. |
| | TL-314, HYD. DIA. 19801-007, W/HYD. PARK BRAKE STEERING/JOYSTICK W/O/AUX. |
| | TL-315, HYD. DIA. 19801-008, BOOM ASSEMBLY W/O/AUX. |
| TRANSMISSION GROUP | TL-103, TRANSMISSION |
| | TL-103A, TRANSMISSION, CONVERTER HOUSING GROUP |

(Continued on next page)
### BILL OF MATERIAL

<table>
<thead>
<tr>
<th>Item</th>
<th>Part No.</th>
<th>Qty.</th>
<th>Description</th>
<th>Serial No./Date of Change</th>
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<tr>
<td>TL-103B</td>
<td>TL-103B</td>
<td>5</td>
<td>TRANSMISSION, CASE &amp; PLATE GROUP</td>
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<td>TL-103C</td>
<td>TL-103C</td>
<td>206</td>
<td>TRANSMISSION, TORQUE CONVERTER GROUP</td>
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<tr>
<td>TL-103CC</td>
<td>TL-103CC</td>
<td>208</td>
<td>TRANSMISSION, PUMP DRIVE GROUP (Effective 05/99)</td>
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<tr>
<td>TL-103D</td>
<td>TL-103D</td>
<td>210</td>
<td>TRANSMISSION, CHARGING PUMP GROUP</td>
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<tr>
<td>TL-103E</td>
<td>TL-103E</td>
<td>212</td>
<td>TRANSMISSION, REVERSE IDLER GROUP</td>
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<tr>
<td>TL-103F</td>
<td>TL-103F</td>
<td>214</td>
<td>TRANSMISSION, REVERSE SHAFT GROUP</td>
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<td>TL-103G</td>
<td>TL-103G</td>
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<td>TRANSMISSION, 3RD &amp; OUTPUT SHAFT GROUP</td>
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<td>TL-103H</td>
<td>TL-103H</td>
<td>220</td>
<td>TRANSMISSION, 1ST &amp; 2ND SHAFT GROUP</td>
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<tr>
<td>TL-103J</td>
<td>TL-103J</td>
<td>222</td>
<td>TRANSMISSION, DISC BRAKE GROUP</td>
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<tr>
<td>TL-103K</td>
<td>TL-103K</td>
<td>226</td>
<td>TRANSMISSION, CONTROL VALVE GROUP</td>
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<tr>
<td>TL-103L</td>
<td>TL-103L</td>
<td>228</td>
<td>TRANSMISSION, DISC BRAKE GROUP</td>
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<td>TL-103M</td>
<td>TL-103M</td>
<td>230</td>
<td>TRANSMISSION, DRIVE PLATE GROUP</td>
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<tr>
<td>TL-103N</td>
<td>TL-103N</td>
<td>232</td>
<td>TRANSMISSION, DRIVE PLATE GROUP</td>
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<tr>
<td>TL-103P</td>
<td>TL-103P</td>
<td>234</td>
<td>CALIPER BRAKE ASSY. (TRC0167)</td>
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<tr>
<td>TL-103Q</td>
<td>TL-103Q</td>
<td>236</td>
<td>CALIPER BRAKE ASSY. (TRC0483)</td>
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<td>TL-239</td>
<td>TL-239</td>
<td>238</td>
<td>TRANSMISSION SHIFTER, 3-SPEED (LPP00213)</td>
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<tr>
<td>TL-239B</td>
<td>TL-239B</td>
<td>240</td>
<td>TRANSMISSION SHIFTER (NLP01278)</td>
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</tr>
<tr>
<td>TL-120</td>
<td>TL-120</td>
<td>243</td>
<td>VALVE GROUP, W/ULTRA PUMP</td>
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<tr>
<td>TL-218</td>
<td>TL-218</td>
<td>246</td>
<td>VALVE, 6-BANK (APP00806-M)</td>
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<tr>
<td>TL-218B</td>
<td>TL-218B</td>
<td>248</td>
<td>VALVE, 5 BANK (NON-AUXILIARY)</td>
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<tr>
<td>TL-247</td>
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<td>VALVE, JOYSTICK CONTROL (APP00737)</td>
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<tr>
<td>LPP28495</td>
<td>LPP28495</td>
<td>252</td>
<td>VALVE, JOYSTICK, VOAC W/SWITCH</td>
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<tr>
<td>TL-068</td>
<td>TL-068</td>
<td>254</td>
<td>VALVE, STEERING SELECTOR (NLP00697)</td>
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<tr>
<td>TL-081</td>
<td>TL-081</td>
<td>256</td>
<td>POWER STEERING MOTOR (LPP19293 Charlynn)</td>
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<tr>
<td>TL-201</td>
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<td>258</td>
<td>POWER STEERING MOTOR (APP00723 Danfoss)</td>
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<tr>
<td>TL-248</td>
<td>TL-248</td>
<td>260</td>
<td>PUMP, MAIN HYDRAULIC, ULTRA (APP00313)</td>
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</tr>
<tr>
<td>TL-120A</td>
<td>TL-120A</td>
<td>262</td>
<td>FILTER, RETURN LINE (APP00310)</td>
<td></td>
</tr>
<tr>
<td>TL-205</td>
<td>TL-205</td>
<td>265</td>
<td>ELECTRICAL SCHEMATIC, TRANSMISSION &amp; STARTING CIRCUIT</td>
<td></td>
</tr>
<tr>
<td>TL-206</td>
<td>TL-206</td>
<td>268</td>
<td>ELECTRICAL SCHEMATIC, INSTRUMENTS</td>
<td></td>
</tr>
<tr>
<td>SPARE PARTS LIST</td>
<td></td>
<td>271</td>
<td>SPARE PARTS LIST</td>
<td></td>
</tr>
</tbody>
</table>
PARTS ORDERING INSTRUCTIONS

This manual was prepared as an aid in expediting the acquisition of the exact parts needed for your machine. Every effort has been made to make this manual as complete and accurate as possible. Proper use of the manual will ultimately reflect shorter downtime.

Parts orders may be placed with Traverse Lift Parts Distribution Center during regular business hours of 7:00 a.m. to 6:00 p.m. Central Time, Monday through Friday. Orders may be placed by mail, telephone or FAX.

Mail orders to: ARDCO/Traverse Lift, L.L.C.
Parts Distribution Center
322 Riley Road
P.O. Box 451960
Houston, TX 77245-1960

Phone orders to: 1-800-332-7396 or 1-713-433-6751

For 24-hour, 7-day/week emergency service phone: 1-713-935-2150

FAX orders to: 1-713-433-1478

When ordering, please provide the following information and note the procedures below:

1. Model, serial number and machine hours of the machine.
2. Name of your company and name of person placing the order.
4. Your phone number.
5. Your purchase order number. IMPORTANT: You must fax a hard copy of your purchase order -- with the “ship to” address and method of shipment clearly noted -- before shipment of your order.
6. Quantity, part number and description of each item.
7. Note whether part is right or left hand by referring to your right or left when operating the machine from the normal operator’s seat position.
8. All orders are F.O.B. shipment point, freight collect, via the cheapest means available, unless other arrangements are specified on your purchase order (see Item 5).
9. New parts returned by distributor to the factory must be returned within 30 days after issuance of a “RETURN GOODS AUTHORIZATION” (RGA) and are subject to a 15% handling charge subtracted from the amount of the parts, unless the parts were sent by mistake from the factory.
10. The order must be checked by you on the day it is received, and the factory must be notified IMMEDIATELY if any parts are missing from the shipment (other than any parts marked backordered”).
11. Warranty parts must be returned by prepaid freight, but only after you have obtained an RGA (RETURN GOODS AUTHORIZATION) from the factory.
12. CONVERSIONS: Circumstances occasionally arise where the factory will offer field replacement, update components or kits for product improvement. It is the responsibility of the customer and/or dealer to document changes made to a particular machine and, if possible, provide the information back to the factory for our records.
ORGANIZATION OF PUBLICATION

This Parts Manual has been designed to assist you in identifying and order replacement parts for your Traverse Lift equipment. With the exception of the “ELECTRICAL GROUP”, which is located at the end, this manual is organized alphabetically by major parts groups. Those assemblies and/or individual parts that make up the group then follow in a descending order from greater to lesser.

Please see the Table of Contents for location of all components.

HOW TO USE THIS MANUAL

Determine which major group the replacement component is a part of.

Open the manual to the Table of Contents and locate the needed group. Under the group, locate the component that is needed. The page number at the right shows where the needed information is located.

Turn to the page number listed and use the illustration to identify the part that is needed. Make a note of the item number that is associated with the part and refer to the “ITEM” column on the part’s BILL OF MATERIAL. The next column (“PART NO.”) gives the Traverse Lift part number needed to place your order.

USING THE MANUAL ON CD-ROM

To View: Follow the instructions above using the Table of Contents to determine which component is needed. Using the “HAND” tool, click on the component to go to the drawing. The Bill of Material for the part will be on the page following the drawing.

To Print: This manual has been designed to print in a facing-page format so it can be photocopied in its entirety as a double-sided document. In order to maintain this format, some pages contain the notation “THIS PAGE INTENTIONALLY LEFT BLANK.”

To print from the CD-ROM, select “FILE”, “PRINT”, then the page(s) desired.
UNDERSTANDING THE BILL OF MATERIAL

Whenever a part has been changed on a machine, there will be two parts listed on the parts page under one item number. The first one will be the old part, and the last one will be the new part now being used. Information regarding the date the change took effect will be listed across from the new part number in the “SERIAL NO./DATE OF CHANGE” column. For example:

<table>
<thead>
<tr>
<th>Item</th>
<th>Part No.</th>
<th>Qty.</th>
<th>Description</th>
<th>Serial No./Date of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>BEB1234</td>
<td>1</td>
<td>BEARING</td>
<td>4-1-95 &amp; before</td>
</tr>
<tr>
<td>4</td>
<td>BEB5678</td>
<td>1</td>
<td>BEARING</td>
<td>4-2-95 &amp; after</td>
</tr>
</tbody>
</table>

NOTE: In cases where there has been only one change, including instances where the part number has been corrected, the item will look like the example below with the date of change being the date the part replaced the one in parenthesis:

<table>
<thead>
<tr>
<th>Item</th>
<th>Part No.</th>
<th>Qty.</th>
<th>Description</th>
<th>Serial No./Date of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>BEB1010</td>
<td>1</td>
<td>BEARING (was BEB-2020)</td>
<td>6-1-97</td>
</tr>
</tbody>
</table>

NOTE: In some cases, instead of listing a date of change, the serial number of the machine on which the change took effect will be cited. For example:

<table>
<thead>
<tr>
<th>Item</th>
<th>Part No.</th>
<th>Qty.</th>
<th>Description</th>
<th>Serial No./Date of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>BEB4321</td>
<td>1</td>
<td>BEARING</td>
<td>S/N 80010 &amp; before</td>
</tr>
<tr>
<td>4</td>
<td>BEB9876</td>
<td>1</td>
<td>BEARING</td>
<td>S/N 80011 &amp; after</td>
</tr>
</tbody>
</table>

Your Traverse Lift machine has been designed to provide you with long, efficient service. In its manufacture, only high quality parts and components have been used.

****IMPORTANT****

THE USE OF PARTS OTHER THAN GENUINE TRAVERSE LIFT PARTS OR TRAVERSE LIFT-APPROVED PARTS MAY VOID ANY PRODUCT WARRANTY THAT MAY BE IN EFFECT AT THE TIME OF SUBSTITUTION.
ABBREVIATIONS USED IN THIS MANUAL

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>AR</td>
<td>As Required</td>
</tr>
<tr>
<td>Assy.</td>
<td>Assembly</td>
</tr>
<tr>
<td>BOM</td>
<td>Bill of Material</td>
</tr>
<tr>
<td>brg.</td>
<td>bearing</td>
</tr>
<tr>
<td>cyl.</td>
<td>cylinder</td>
</tr>
<tr>
<td>dwg.</td>
<td>drawing</td>
</tr>
<tr>
<td>ft. lbs.</td>
<td>foot pounds</td>
</tr>
<tr>
<td>ill. or illus.</td>
<td>illustration</td>
</tr>
<tr>
<td>in. lbs.</td>
<td>inch pounds</td>
</tr>
<tr>
<td>incl.</td>
<td>includes or including</td>
</tr>
<tr>
<td>lbs.</td>
<td>pounds</td>
</tr>
<tr>
<td>LH or lh</td>
<td>Left Hand</td>
</tr>
<tr>
<td>mtg.</td>
<td>mounting</td>
</tr>
<tr>
<td>N/A</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>no.</td>
<td>number</td>
</tr>
<tr>
<td>N/S</td>
<td>Not Shown (on illustration)</td>
</tr>
<tr>
<td>NSS</td>
<td>Not Sold Separately</td>
</tr>
<tr>
<td>opt.</td>
<td>optional</td>
</tr>
<tr>
<td>pg.</td>
<td>page</td>
</tr>
<tr>
<td>qt.</td>
<td>quart</td>
</tr>
<tr>
<td>RH or rh</td>
<td>Right Hand</td>
</tr>
<tr>
<td>see sep. ill</td>
<td>see separate illustration (located elsewhere in manual)</td>
</tr>
<tr>
<td>S/N</td>
<td>Serial Number (usually of machine)</td>
</tr>
<tr>
<td>w/</td>
<td>with</td>
</tr>
<tr>
<td>w/o</td>
<td>without</td>
</tr>
</tbody>
</table>

ADDITIONAL REFERENCES TO NOTE:

In a parts list, when a dotted line appears in the “PART NO.” column (---------), this means that the item has not been assigned a number and should be ordered by the description given in the next column.

References to “right hand” or “left hand” in this manual are made from the position of the operator’s seat, facing forward.*

* On Dana Spicer Axles, left hand and right hand references are determined by looking at pinion on 3rd member, NOT BY LOCATION ON UNIT.
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LEFT BLANK
<table>
<thead>
<tr>
<th>Item</th>
<th>Part No.</th>
<th>Qty.</th>
<th>Description</th>
<th>Serial No./Date of Change</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>13</td>
<td>AXLE GROUP - FRONT-CUC SERIES</td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>Part No.</td>
<td>Qty</td>
<td>Description</td>
<td>Serial No./Date of Change</td>
</tr>
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NOTE: AXLE UPDATE KIT COVERS SERIAL NUMBERS 60100-CUC THRU 60363-CUC, 60376-CUC AND 60378-CUC. PLEASE CHECK YOUR UNIT S/N AND CONFIRM WHETHER UPDATE HAS BEEN COMPLETED BEFORE ORDERING PARTS.
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TL-324, AXLE, FRONT, TIE ROD
**TL-324 AXLE, FRONT, TIE ROD**

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TL-325, AXLE, FRONT, OSCILATING SUPPORT

Diagram of TL-325, showing parts numbered 1 through 5.
# TL-325 AXLE, FRONT, OSCILATING SUPPORT

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TL-326, AXLE, REAR, BOX AND COVERS
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# TL-328 BILL OF MATERIAL

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## TL-328
### AXLE, REAR, AXLE & WHEEL HUB ASSY.

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## BILL OF MATERIAL

**TL-331**

**AXLE, REAR, OSCILATING SUPPORT**

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AXLE GROUP - CCD SERIES
## BILL OF MATERIAL

**TL-644025**  
ASSY., AXLE, DANA SPICER (NLP01527)  
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|      | LL-2989-485 | 1 | CARRIER SUB ASSEMBLY  
(INCLUDES ITEMS 26 & 27) |                          |
| 2    | LL-2989-338 | 1 | BEARING CUP, ROLLER |                           |
| 3    | LL-2989-339 | 1 | BEARING CONE, ROLLER |                           |
| 4    | LL-2989-334 | 1 | SHIM |                           |
| 5    | LL-2989-486 | 1 | SPIRAL BEVEL GEAR & PINION ASSY.  
(INCLUDES ITEM 23) |                          |
| 6    | LL-2989-335 | 1 | SPACER |                           |
| 7    | LL-2989-336 | 1 | BEARING CUP, ROLLER |                           |
| 8    | LL-2989-337 | 1 | BEARING CONE, ROLLER |                           |
| 9    | AXD0114 | 1 | THRUST WASHER, BEARING  
(Pettibone: LL-2989-156) |                          |
| 10   | AXD0113 | 1 | OIL SEAL  
(Pettibone: LL-2989-155) |                          |
| 11   | AXD0112 | 1 | DEFLECTOR, SEAL  
(Pettibone: LL-2989-141) |                          |
| 12   | LL-2989-341 | 1 | END YOKE (SEE ITEM 148) |                          |
| 13   | AXD0010 | 1 | WASHER, PINION NUT  
(Pettibone: LL-2989-140) |                          |
| 14   | AXD0109 | 1 | NUT, PINION  
(Pettibone: LL-2989-139) |                          |
| 15   | LL-2989-480 | 1 | DIFFERENTIAL STANDARD CASE  
(SEE ITEM 147) |                          |
| 16   | AXD0147 | 2 | THRUST WASHER  
(Pettibone: LL-2989-142) |                          |
| 17   | AXD0146 | 2 | DIFFERENTIAL GEAR  
(Pettibone: LL-2989-145) |                          |
| 18   | LL-2989-344 | 2 | THRUST WASHER |                           |
| 19   | LL-2989-343 | 2 | PINION, DIFFERENTIAL  
(SEE ITEM 149) |                          |
| 20   | LL-2989-342 | 1 | SHAFT, DIFFERENTIAL STD. & T/L |                          |
| 21   | LL-2989-346 | 1 | PIN, ROLL |                           |
| 22   | LL-2989-347 | 2 | BEARING CONE, ROLLER |                           |
| 23   | LL-2989-486 | 1 | SPIRAL BEVEL GEAR & PINION  
(INCLUDED IN ITEM 5) |                          |
| 24   | AXD0150 | 12 | DRIVE GEAR SCREW  
(Pettibone: LL-2989-152) |                          |
| 25   | LL-2989-348 | 2 | BEARING CUP, ROLLER |                           |
| 26   | LL-2989-349 | 2 | DIFFERENTIAL BEARING CAP  
(INCLUDED IN ITEM 1) |                          |
| 27   | LL-2989-352 | 4 | HEX BOLT |                           |
| 28   | LL-2989-351 | 2 | ADJUSTING RING |                           |
| 29   | AXD0132 | 2 | ADJUSTING RING CLIP  
(Pettibone: LL-2989-90) |                          |
| 30   | AXD0133 | 2 | FLAT WASHER  
(Pettibone: LL-2989-87) |                          |
| 31   | AXD0134 | 2 | HEX BOLT  
(Pettibone: LL-2989-180 OR -353) |                          |
| 32   | LL-2989-350 | 1 | CARRIER COVER |                           |
| 33   | LL-2989-536 | 14 | FLAT WASHER |                           |
| 34   | LL-2989-531 | 14 | HEX BOLT |                           |
| 35   | AXD0154 | 1 | PLUG, PIPE, INTERNAL DRIVE  
(Pettibone: LL-2989-171) |                          |
| 36   | AXD0154 | 1 | PLUG, PIPE, INTERNAL DRIVE  
(Pettibone: LL-2989-171) |                          |
<p>| 37   | LL-2989-358 | 24 | SPRING, COMPRESSION |                           |
| 38   | LL-2989-525 | 2 | GLIDE RING, INNER |                           |</p>
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TL-240, DECAL KIT (APP00379)

DO NOT OPERATE MACHINE WHEN LOW BRAKE PRESSURE LIGHT IS ON.
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TL-240, DECAL KIT (APP00379)

- WARNING
  HOT AND PRESSURIZED FLUID
  Can cause severe burns. Let system cool before removing cap. Remove cap slowly.
- WARNING
  PERSONAL INJURY HAZARDS.
  Wear required personal protective equipment at all times.
- DANGER
  FALLING BOOM OR LOAD
  Will cause death or severe injury. Do not move boom or load over personnel.
- WARNING
  CARRYING PERSONNEL
  Can cause death or severe injury. Do not lift, lower or carry personnel. Do not fit machine with any type of personnel work platforms.
- WARNING
  CARBON MONOXIDE
  Can cause death or severe injury. Operate machine outdoors or in a well ventilated area.
- WARNING
  NO RIDING
- WARNING
  INADEQUATE BRAKING ABILITY
  Can cause death or severe injury. Check service and parking emergency brake before operating machine. Shut down machine if service brake pressure warning light is on.
- WARNING
  MOVING BELTS AND SPINNING BLADES
  May cause loss of fingers or hand. Keep hands, hair and loose clothing clear while engine is running. Disengage battery before working in engine compartment.
- WARNING
  PINCH POINT
- WARNING
  HOT EXHAUST PIPE
  Can cause severe burns. Do not touch exhaust pipe when hot, or when engine is running.
<table>
<thead>
<tr>
<th>Item</th>
<th>Part No.</th>
<th>Qty</th>
<th>Description</th>
<th>Serial No./Date of Change</th>
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<tbody>
<tr>
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<tr>
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<td>DECAL, “PERSONAL INJURY HAZARDS”</td>
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<tr>
<td>32</td>
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<td>47</td>
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<td>DECAL, “LIFT CAPACITY CHART Rev. 1” (TL6035)</td>
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<td>DECAL, “6035” RIGHT</td>
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<td>DECAL, “BOOM EXT. INDICATOR” (4 PC/SET)</td>
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</table>
WARNING

MACHINE TIP-OVER OR STRUCTURAL DAMAGE
Can cause death or severe injury.
- Do not exceed rated lift capacities.
- Level machine before raising boom.
- Lower boom before traveling.
- Operate on firm, level surface.

TIRE BALLAST
NOT REQUIRED

PRESSURE TEST PORTS

BRAKES
1100 PSI

STANDING
1675 PSI

PUMP #1
3000 PSI

PUMP #2
3000 PSI

PILOT
350 PSI

TL-240, DECAL KIT (APP00379)
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<td>53</td>
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<td>DECAL “PRESSURE TEST PORTS Rev. 1”</td>
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TL-127, DRIVELINE ASSEMBLY

REAR AXLE

FRONT AXLE

CALL 1-800-33-ARDCO
**TL-127**  
**DRIVELINE ASSEMBLY**  

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<td>TIRE, 13.00 X 24 - 12 PLY - GALAXY</td>
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<td>APP00314</td>
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<td>WHEEL, 9 X 24</td>
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<td>APP00929</td>
<td>4</td>
<td>WHEEL</td>
<td>60585-CCC; 60590 and after</td>
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<td>BRACKET, FRAME LEVEL MOUNTING</td>
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<td>DSM0115</td>
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<td>YOKE, SLIP</td>
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<td>DSM0115</td>
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<td>14</td>
<td>DSS0333</td>
<td>1</td>
<td>U-bolt Kit (contains 2 Caps &amp; 4 Bolts)</td>
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## BILL OF MATERIAL

**TL-243**  
**AIR INTAKE ASSEMBLY (CUMMINS ENG.)**  

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<tbody>
<tr>
<td>1</td>
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<td>4</td>
<td>BOLT, HEX, MOUNTING, 5/16-18 UNC X 1” LG</td>
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<td>--------</td>
<td>4</td>
<td>LOCK WASHER, 5/16-18</td>
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<tr>
<td>3</td>
<td>MIY0078</td>
<td>2</td>
<td>ELBOW, 90-DEGREE</td>
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<tr>
<td>4</td>
<td>MIW0021</td>
<td>4</td>
<td>CLAMP, 2-9/16” - 3-1/2”</td>
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<tr>
<td>5</td>
<td>ENE0189</td>
<td>1</td>
<td>TUBIN, ALUMINIZED, 3” DIA. X 15” LONG</td>
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<tr>
<td>6</td>
<td>LPP00184</td>
<td>1</td>
<td>CLEANER, AIR</td>
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<tr>
<td>7</td>
<td>FIF0026</td>
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<td>CLAMP, MOUNTING</td>
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<td>8</td>
<td>LPP17136</td>
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<td>CAP, AIR STACK</td>
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<td>LPP21485</td>
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<td>FIF0080</td>
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<td>VALVE, DUST</td>
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<td>FIF0078</td>
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<td>ELEMENT, FILTER</td>
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TL-244, AIR INTAKE ASSEMBLY (JOHN DEERE ENG.)
## BILL OF MATERIAL

**TL-244**

**AIR INTAKE ASSEMBLY (JOHN DEERE ENG.)**

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<tbody>
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<td>ELBOW, 90-DEGREE</td>
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TL-207, ENGINE ACCESSORIES (CUMMINS ENG.)

NO
DRAWING
AVAILABLE
### TL-207 ENGINE ACCESSORIES (CUMMINS ENG.)

<table>
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<td>ENC0100</td>
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<td>ENC0110</td>
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<td>ENC0075</td>
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## TL-245
### EXHAUST ASSEMBLY (CUMMINS ENG.)

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<td>4</td>
<td>NUT, HEX, 3/8 UNC</td>
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<td>BAND, MOUNTING</td>
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TL-217, EXHAUST ASSEMBLY (JOHN DEERE ENG.)

bottom plate at battery comp.
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# Exhaust Assembly, TL-121 (w/JD Engine)

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## Service Bulletin Reference

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TL-123, RADIATOR ASSEMBLY (CUMMINS ENG.)
## TL-123

**RADIATOR ASSEMBLY (CUMMINS ENG.)**

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## TL-195

**RADIATOR ASSEMBLY (JOHN DEERE ENG.)**

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TL-202, CARRIAGE ASSEMBLY
# TL-237  
**CARRIAGE ASSEMBLY**

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TL-238, BOOM ASSEMBLY

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9, 10, 11

3, 4, 5, 6, 7, 8

2

14, 15

12

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TL-221 FORK ROTATE CARRIAGE ASSEMBLY

Page 1 of 1
TL-111, QUICK DISCONNECT

INNER BOOM

FRONT TILT CYLINDER

Casting Part No.
LPXL8006-1DC
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## Operator's Compartment Bill of Material

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*A NOTE: WALVOIL HAS ONE PC HANDLE;
VOAC HAS TWO PC HANDLES SPLIT VERTICALLY
DOWN THE MIDDLE; MOUNTING IS DIFFERENT
FOR EACH JOYSTICK*
## TL-179 ENGINE MOUNT ASSEMBLY (Cummins Eng.)

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TL-132, ENGINE MOUNT ASSEMBLY (John Deere Eng.)
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TL-131, TRANSMISSION MOUNT ASSEMBLY

[Diagram of a transmission mount assembly with labeled parts 1, 2, 3, 4, 5, and 6]
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TL-051, CYLINDER, FRAME LEVELING (LPP27552)
**ARDCO/Traverse Lift, LLC**  
**BILL OF MATERIAL**

**TL-051**  
**CYLINDER, FRAME LEVELING (LPP27552)**  
Page 1 of 1

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## BILL OF MATERIAL

**TL-084**

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**CALL 1-800-33-ARDCO**
TL-115, CYLINDER, CARRIAGE TRANSFER (LPP00251)
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### BILL OF MATERIAL

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**WITH HYDRAULIC PARK BRAKE W/AUX.**

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## HYDRAULIC DIAGRAM 19801-002
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**HYDRAULIC DIAGRAM, 19801-004**

**TL-311 BOOM ASSEMBLY W/ AUX.**

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### HYDRAULIC DIAGRAM 19801-005, W/HYD. PARK BRAKE RETURN/SUCTION WO/MANIFOLD

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NOTE: PLEASE PROVIDE THE MACHINE’S TRANSMISSION MODEL NUMBER WHEN ORDERING PARTS FROM THIS GROUP.
TL-103CC, TORQUE CONVERTER GROUP (Effective 05/99)
### TORQUE CONVERTER GROUP

**TL-103CC**

*Effective 05/99*

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**TL-103E TRANSMISSION, CHARGING PUMP GROUP**

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*NOTE: A 1000-HOUR FILTER MUST BE USED. IF FILTER IS NOT REPLACED WITH A 1000-HOUR CLARK-HURTH FILTER, TRANSMISSION FAILURE MAY RESULT.*
# BILL OF MATERIAL

**TL-103F**  
TRANSMISSION, REVERSE IDLER GROUP  
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**TRANSMISSION, 3RD & OUTPUT SHAFT GROUP**  
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# TL-103L

## TRANSMISSION, DISC BRAKE GROUP

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*ITEM NO. 2 - CARLISLE BRAKE ASSY., SEE PARTS LIST TL103P

*ITEM NO. 2 - MICO BRAKE ASSY., SEE PARTS LIST TL-103Q

NOTE: BOTH THE CARLISLE AND MICO BRAKES ARE COMPLETELY INTERCHANGEABLE AND SERVICEABLE.

BRAKE SHOULD BE SERVICED AS PER TRANSMISSION MODEL NUMBER AND SERIAL NUMBER OR PART NUMBERS
### BILL OF MATERIAL

**TL-103M TRANSMISSION, CONTROL VALVE GROUP**

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## TL-103N

**TRANSMISSION, DRIVE PLATE GROUP**

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TL-103P, CALIPER BRAKE ASSY. (TRC0167)
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NOTE: ORIGINAL EQUIPMENT ON CLARK-HURTH TRANSMISSION MODELS NUMBERS:
1102T12366-11
1102T12366-15
1102T12366-13
TL-103Q, CALIPER BRAKE ASSY. (TRC0483)
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NOTE: ORIGINAL EQUIPMENT FOR
TRANSMISSION MODEL NO. 1102T12366-17
TL-239, TRANSMISSION SHIFTER, 3-SPEED (LPP00213)
(Replaced July 1997 with NLP01278)
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TRANSMISSION SHIFTER, 3-SPEED (LPP00213)
(Replaced July 1997 with NLP01278)
TL-239B, TRANSMISSION SHIFTER (NLP01278)

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### TL-120 VALVE GROUP, W/ULTRA PUMP

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**NOTE 1:** Refer to Parts List TL-201, Danfoss Power Steering Motor, Part No. APP00723. Check product name of power steering motor on vehicle. Direct replacement for LPP19293 Charlynn power steering motor.

**NOTE 2:** Refer to Parts List TL-081, Charlynn Power Steering Motor, Part No. LPP19293. Check product name of power steering motor on vehicle.

**NOTE 3:** Refer to Parts List TL-120A, Return Line Filter, P/N APP00310

**NOTE 4:** Item 10. Optional Pump LPP00231.
TL-218
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## BILL OF MATERIAL

**LPP28495**  
**VALVE, JOYSTICK, VOAC W/SWITCH**

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TL-081, POWER STEERING MOTOR (LPP19293 Charlynn)
(Used on vehicles built July 1995 and before)
# POWER STEERING MOTOR (LPP19293 Charlynn)

(Used on vehicles built July 1995 and before)  

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**NOTE 1:** CHECK THE PRODUCT NAME OF POWER STEERING MOTOR ON VEHICLE

**NOTE 2:** CHARLYN MOTOR LPP19293 USED WITH COLUMN STEERING LPP18726
TL-201, POWER STEERING MOTOR (APP00723 Danfoss)
## TL-201

**POWER STEERING MOTOR (APP00723 Danfoss)**

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**NOTE 1:** CHECK THE PRODUCT NAME OF POWER STEERING MOTOR ON VEHICLE.

**NOTE 2:** DANFOSS MOTOR APP00723 USED WITH COLUMN STEERING APP00724.
TL-248, PUMP, MAIN HYDRAULIC, ULTRA (APP00313)

NO DRAWING
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Click here for Service Information
TL-120A, FILTER, RETURN LINE (APP00310)
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## TL-205

**TRANSMISSION & STARTING CIRCUIT**

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2PR POWER MASTER SERVICE INSTRUCTIONS

DISMANTLING AND ASSEMBLY

Prior to dismantling the unit ensure that the exterior of the pump and working area are thoroughly cleaned and free of possible sources of contamination.

1. Mark Body and flange to ensure correct re-assembly.
2. Remove four nuts and washers, or alternatively through bolts if fitted, separate flange and body using a soft faced hammer.
3. Remove retaining circlip and shaft seal from flange ensuring the shaft seal recess is not damaged.
4. Grasp driveshaft and remove with balance plate, finally remove driven gear and lower balance plate. Note the position of these for correct re-assembly.
5. Remove and discard all seals and clean off all sealant from the flange/body interface.

INSPECTION

Inspect O-ring groove and shaft seal recess in mounting flange, these should be undamaged and free from burrs.

The pump must be renewed if:

a) The PFE coated bearings in body and flange are worn through revealing the bronze backing.
b) The gear side faces are scored, often operation on contaminated fluid results in a distinct wear step coincident with the gear tooth root diameter with corresponding wear on balance plates.
c) There is a noticeable wear groove on the driveshaft where the shaft seal lips run.
d) The bronze balance plates are scored.

Note: It is not recommended that damaged gears/bodies, flanges or balance plates are replaced individually as this will not effect a good repair.

ASSEMBLY

Before assembly, all parts must be perfectly clean and lubricated with Hydraulic Fluid.
Renew all seals using Hydraulic Fluid as a lubricant.
1. Fit the shaft seal into the mounting flange with the garter spring facing into the pump and refit circlip.

2. Stand pump body on the rear face, fit channel seals and back up rings into groves on balance plate and feed plate into bore. Ensure that the seals remain in their groove and that the two small holes in the balance plate are to the low pressure side of the pump.

3. Insert drive shaft and driven gear into their original bores.

4. Replace 2nd balance plate into its original position, Small holes to low pressure side, fit channel seal and back up ring.

5. Fit O-Ring into its groove in the mounting flange and apply a small amount of Loctite sealant to body lower front face i.e. outboard of oval location. This sealant is to prevent moisture entering this area and causing corrosion and is not a hydraulic seal.

6. Carefully fit mounting flange in its original position, the 4mm diameter drain hole in the rear face must be to low pressure side, DO NOT DAMAGE SEAL ON SHAFT.

7. Fit washers and nuts to studs and torque tighten to 65-70 ft. Lbs.

8. Pour a small amount of clean hydraulic fluid into the inlet port and check that the shaft can be turned without undue force.
ROUTINE MAINTENANCE

No maintenance is necessary other than periodic checks for tightness of the mounting bolts and port fittings plus visual examination for oil leaks. The unit should be kept externally clean, especially in the area of the shaft seal as dirt can accelerate seal wear and cause leakage.

The unit must be operated on clean hydraulic fluid and the systems manufacturer’s directions for periodic renewal of filters must be adhered to. A fluid cleanliness level of ISO4406 17/14 or better is recommended to give maximum life.

DISMANTALING THE VALVE

1. Before commencing work, the valve must be cleaned externally to remove all accumulations of dirt that could enter the unit during dismantling.
2. Remove valve from pump.
3. Remove spool plugs 1 and 13 allowing spring, 11, and spool, 10, to be removed. Examine spool and bore for signs of damage. Remove 'O' rings 2 and 12 and replace with new.
4. Remove core plug (335 0900 155) by drilling a 1/4” hole off center, just to break through. Pop the core plug out by placing a 5/8” center punch in the hole and prying up. Unscrew relief valve seat.
5. Remove relief valve seat, valve, 5, and spring, 4. Inspect for signs of wear or damage Remove 'O' rings 6 and 7 and replace with new.
6. Thoroughly clean all components.

ASSEMBELING THE VALVE

7. Replace Relief Valve Components ensuring valve remains located in valve seat. Screw in Relief Valve seta to just take up spring load. Relief valve pressure will require setting on the application.
8. Replace spool, spring, and spool plugs, Torque plug 13 to 100 Nm and plug 1 to 80 Nm.
9. Refit valve to pump ensuring inlet to valve in rear face is over high-pressure side of pump, Semi-circular cut out in bushes.
10. Run pump at normal operating speed, adjust valve pressure setting by screwing in/out relief valve seat until correct pressure level is reached.
11. Peen valve set in position using a center punch to prevent movement in service. Finally fit new core plug, 9.

SPECIAL NOTES

1. A primary flow can be modified to allow for more flow by enlarging the flow control orifice. To gain access to this orifice, Heat must be applied to the dampening orifice at the bottom of the spool. Remove dampening plug and enlarge control orifice and refit dampening plug using Loctite thread locker. See page 3.
Seal Kit Part Number
335 0500 001
SPOOL ASSEMBLY INSTRUCTIONS:

THOROUGHLY CLEAN AND DEGREASE SPOOL AND GRUBSCREW. APPLY LOCTITE 603 TO THREADS ON BOTH PARTS PRIOR TO ASSEMBLY. SCREW GRUBSCREW INTO THREAD RUNOUT AND TORQUE TIGHTEN TO 5 Nm. ALLOW 3 HOURS MINIMUM CURING TIME BEFORE APPLYING 'BREAK-OUT' TORQUE CHECK TO GRUBSCREW OF 7 Nm. GRUBSCREW MUST NOT MOVE. NOTE: PROTECT O/D OF SPOOL AT ALL TIMES.
Accumulator Charge Valve

Cut-in/Cut-out Pressure Adjustment

Mike McIntosh
Commercial Intertech-VSD Ultra Group

The valve, which may be mounted integrally with a pump, is used to provide flow to charge an accumulator and flow to hydraulic services. It is based on the Ultra Priority Flow Divider and delivers flow to the accumulator, at a pre-set rate, which is given Priority over flow to services. When the accumulator pressure reaches a set level all the flow is switched to services (or tank). The flow to the accumulator is re-established when its pressure drops to about 80% of its pre-set value. The services flow may be used at pressure above or below the accumulator pressure (within the pump rating).

Adjustment of the Cut-in/Cut-out pressure

1. Locate Unloader valve cap (8840-003-80C).
2. Remove welch plug (9610-027-00D) by drilling a 5/32” hole off center, just to break through. Pop the welch plug out by placing a 5/8” center punch in the hole and prying up.
3. With a 10mm socket, loosen lock nut (9113-128-ZPF)
4. With 3mm Hex driver adjust adjustment screw 9114-884-00N. Clockwise will increase the Cut-in/Cut-out pressures and counter clockwise will decrease the Cut-in/Cut-out pressures.
5. When desired pressure setting has been achieved Lock adjustment screw 9114-884-00N by tightening lock nut 9113-128-ZPF to 4-6Nm.
6. Reset a new welch plug 9610-027-00D.

Note: By increasing or decreasing the Cut-in pressure the Cut-out pressure will also increase or decrease due to pressure ratio being established via seat area.
ACUMULATOR CHARGE VALVE ASSEMBLY INSTRUCTIONS:

ALL COMPONENTS TO BE THOROUGHLY CLEAN PRIOR TO ASSEMBLY.
"O" RINGS TO BE SPEARED WITH HIGH MELTING POINT MINERAL GREASE ON ASSEMBLY.

THOROUGHLY CLEAN SPINDLE AND GRUBSCREW.

APPLY LOCTITE 603 TO THREADS OF SPINDLE AND GRUBSCREW PRIOR TO ASSEMBLY.

Screw GRUBSCREW FULLY INTO SPINDLE AND TORQUE TIGHTEN TO 5 Nm.

ALLOW 3 HOURS MINIMUM DURING THE BREAK-OUT TORQUE CHECK TO GRUBSCREW OF 7 Nm. GRUBSCREW MUST NOT MOVE.

NOTE: PROTECT ID OF SPINDLE AT ALL TIMES.

THOROUGHLY CLEAN AND GREASE SPINDLE AND GRUBSCREW.

APPLY LOCTITE 603 TO THREADS OF SPINDLE AND GRUBSCREW PRIOR TO ASSEMBLY.

Screw GRUBSCREW FULLY INTO SPINDLE AND TORQUE TIGHTEN TO 5 Nm.

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NOTE: PROTECT ID OF SPINDLE AT ALL TIMES.

THOROUGHLY CLEAN AND GREASE SPINDLE AND GRUBSCREW.

APPLY LOCTITE 603 TO THREADS OF SPINDLE AND GRUBSCREW PRIOR TO ASSEMBLY.

Screw GRUBSCREW FULLY INTO SPINDLE AND TORQUE TIGHTEN TO 5 Nm.

ALLOW 3 HOURS MINIMUM DURING THE BREAK-OUT TORQUE CHECK TO GRUBSCREW OF 7 Nm. GRUBSCREW MUST NOT MOVE.

NOTE: PROTECT ID OF SPINDLE AT ALL TIMES.