The AutoShift® 10-Speed

Operator Ease Combined with Computer Controlled Efficiency for the Ultimate in Performance and Safety

- Automated shifting on proven Fuller® ratio 10-speed transmission models.
- Shift-by-wire eliminates mechanical lever shifting, keeping both hands on the wheel.
- Clutch necessary for start-up and stopping only, prolonging clutch life.
- Computer controlled shifts at ideal engine speed for best efficiency and performance.
- Reduces driver skill requirements through ease of operation.
- Reduces potential for drivetrain abuse by inexperienced drivers.
- Accurate diagnosis and repair with continuous electronic self-diagnostics.
- Modular automation design for ease of diagnosis and service.
- Requires appropriate electronic engine and engine brake. Consult engine OEM for availability.
- Roadranger warranties are available for a wide variety of applications. To find the coverage that applies to your specific vocation, please see the Vocational Warranty Guide (TCWY0900) at www.roadranger.com.

Availability and position of shift controls may vary. Contact OEM dealer for details.
Fuller® Automated Transmissions

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
<th>CAPACITY</th>
<th>WEIGHT*</th>
<th>LENGTH**</th>
<th>SPEEDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTO-10910B-AS3</td>
<td>1050 lbs. [1423 Nm]</td>
<td>821 lbs. [372.39 kg]</td>
<td>29.9 in. [840.74 mm]</td>
<td>10 forward, 2 reverse</td>
</tr>
<tr>
<td>RTO-12910B-AS3</td>
<td>1250 lbs. [1694 Nm]</td>
<td>821 lbs. [372.39 kg]</td>
<td>29.9 in. [840.74 mm]</td>
<td>10 forward, 2 reverse</td>
</tr>
<tr>
<td>RTO-14910B/C-AS3</td>
<td>1450 lbs. [1966 Nm]</td>
<td>873 lbs. [395.98 kg]</td>
<td>29.9 in. [840.74 mm]</td>
<td>10 forward, 2 reverse</td>
</tr>
<tr>
<td>RTO-16910B/C-AS3</td>
<td>1650 lbs. [2237 Nm]</td>
<td>874 lbs. [396.43 kg]</td>
<td>29.9 in. [840.74 mm]</td>
<td>10 forward, 2 reverse</td>
</tr>
<tr>
<td>RTO-18910B-AS3</td>
<td>1850 lbs. [2508 Nm]</td>
<td>874 lbs. [396.43 kg]</td>
<td>29.9 in. [840.74 mm]</td>
<td>10 forward, 2 reverse</td>
</tr>
</tbody>
</table>

* Dry weight including clutch.
** Lengths listed are from face of clutch housing to front bottoming surface of companion flange or yoke.

**Specifications:**

Clutch Housing:
- SAE #1 and #2.
- Grey iron or aluminum available.

Power Take-Offs:
- 2 SAE standard openings.
- Right side, regular duty, 6-bolt.
- Bottom, heavy-duty, 8-bolt.
- Optional through-shaft PTO.

PTO Drive Gears:
- Right side, 45-tooth, 6/8 pitch.
- Bottom, 47-tooth, 6/8 pitch.
  B ratio PTO gear turns at .94 engine speed. C ratio PTO gear turns at .70 engine speed.

Oil Capacity:
- Approx. 26 pints [12 liters].
- Integral oil pump available.
- Pump standard on 1450, 1650 and 1850 series.

**AutoShift® Operation:**

The AutoShift® transmission is an advanced shift-by-wire system consisting of a Fuller® heavy-duty transmission communicating with an electronic engine utilizing the SAE-J1939 protocol for precise control of the engine and transmission functions. The clutch is used only for starting and stopping. Once the vehicle is in motion, AutoShift operates like an automatic transmission, with the efficiency of a manual transmission.

**Model Nomenclature:**

- **Roadranger:**
- **Twin Countershift:**
- **Overdrive:**
- **14:**
- **9:**
- **10:**
- **C:**
- **AS3:**

**Ratios and Steps:**

<table>
<thead>
<tr>
<th>GEAR</th>
<th>B RATIO</th>
<th>% STEP</th>
<th>C RATIO</th>
<th>% STEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th</td>
<td>.74</td>
<td>34</td>
<td>.73</td>
<td>37</td>
</tr>
<tr>
<td>9th</td>
<td>1.00</td>
<td>36</td>
<td>1.00</td>
<td>38</td>
</tr>
<tr>
<td>8th</td>
<td>1.36</td>
<td>35</td>
<td>1.38</td>
<td>37</td>
</tr>
<tr>
<td>7th</td>
<td>1.83</td>
<td>34</td>
<td>1.89</td>
<td>38</td>
</tr>
<tr>
<td>6th</td>
<td>2.46</td>
<td>35</td>
<td>2.61</td>
<td>37</td>
</tr>
<tr>
<td>5th</td>
<td>3.32</td>
<td>34</td>
<td>3.58</td>
<td>37</td>
</tr>
<tr>
<td>4th</td>
<td>4.46</td>
<td>36</td>
<td>4.90</td>
<td>38</td>
</tr>
<tr>
<td>3rd</td>
<td>6.07</td>
<td>35</td>
<td>6.76</td>
<td>37</td>
</tr>
<tr>
<td>2nd</td>
<td>8.18</td>
<td>34</td>
<td>9.25</td>
<td>38</td>
</tr>
<tr>
<td>1st</td>
<td>10.96</td>
<td>33</td>
<td>12.80</td>
<td></td>
</tr>
<tr>
<td>Hi Rev</td>
<td>2.52</td>
<td></td>
<td>2.78</td>
<td></td>
</tr>
<tr>
<td>Lo Rev</td>
<td>11.23</td>
<td></td>
<td>13.63</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>14.81</td>
<td></td>
<td>17.53</td>
<td></td>
</tr>
</tbody>
</table>

**Top View of Pushbutton Shift Console:**

- **PTO Indicator**
- **Gear Selection Indicator Lamps**
- **Service Indicator Lamp**
- **Manual Gear Selection Buttons**
- **Gear Selection Buttons**
  - **R - Reverse**
  - **N - Neutral**
  - **D - Drive** — Automatic Gear Selection
  - **Manual** — Manual Gear Selection
  - **Low**

Hand shifters are also available. Availability and position of shift controls may vary. Contact OEM dealer for details.

For spec’ing or service assistance, call 1-800-826-HELP (4357) or visit our web site at www.roadranger.com. In Mexico, call 001-800-826-4357.

Roadranger: Eaton, Dana, and other trusted partners providing the best products and services in the industry, ensuring more time on the road.

©2010 Eaton Corporation and Dana Limited
All rights reserved. Printed in USA • TRSL0281 1110