

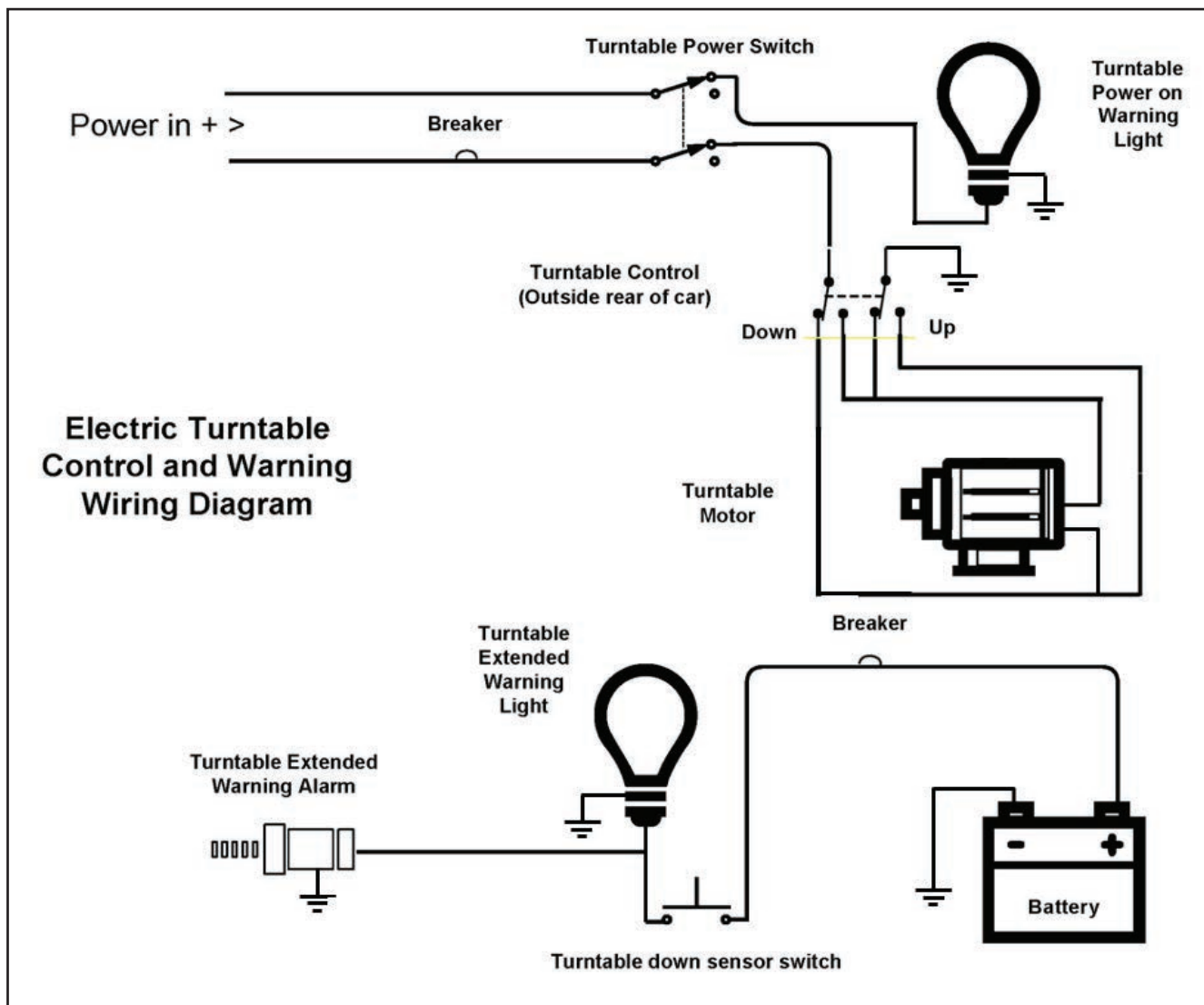
IMPLEMENTING THE NEW TURNTABLE RECOMMENDATIONS BY DAN PAGE

The 2021 March/April issue of The SETOFF included a great article by Brian Davis outlining the NARCOA committee’s work that improved railcar turntables. A vital part of the committee’s work is a table of recommendations. The table appears on page 14 in this edition of The SETOFF for your reference. You can see the full article at:

http://narcoa.memberlodge.org/resources/Documents/Setoff/SO2021/SETOFF_March-April_2021.pdf

My car has an electrically operated turntable, and I wanted to implement the new controls that the committee recommended. My situation falls into the “Electric Driven Jack Screw” column of the committee’s table of recommendations. My friend and Area Director Steve Paluso generously offered to assist me. Steve is a fantastic mechanic and did all the hard work!

The requirements that I needed to address were the turntable master switch and the turntable position alarm. To do this, Steve came up with the design shown here in figure one. The design illustrates the turntable control and warning system.



To operate the turntable, I first flip the red turntable power switch ON. The control activates a warning light built into the button and shows me the turntable system is powered on.



Then, I exit the car and operate the switch mounted at the rear of the vehicle. This is the moment in time shown in the drawing. As soon as the turntable begins to descend, the plunger of the Turntable Down sensor switch, usually compressed by the turntable plate in the Up position, extends and closes the circuit on the turntable down alarm system. Inside the car, the alarm and the indicator light (below) activate and operate until the turntable comes back up.



Note that the warning circuit is independent of the turntable motor. This system gives me peace of mind knowing that I will know if, for some reason, my turntable begins to extend while I am inside the car. Additionally, I know that power is not applied to the turntable motor when the switch in the railcar is off. And since the turntable movement control is outside the car, I know I will not inadvertently extend the turntable while going down the tracks.

I want to thank the members of the turntable committee Tom Sopchak (chair), John Gonder, Steve Paluso, Dale Brix, Ed Lee, and Brian Davis, for their work to produce these guidelines.

Parts List and Sources for Turntable Upgrade:

Switch box: <https://amzn.to/2XuUr44>

Dash warning light: <https://amzn.to/2YYblsA>

Dash warning alarm: <https://amzn.to/3lRwaPm>

(Links to Amazon earn a small commission for NARCOA at no cost to you.)

Outside rear switch: <http://fredericksburgshops.com/turntable.html>

Red lighted rocker switch cover with laser etched markings:

Rocker Switch Pros:

https://rockerswitchpros.com/product/custom-rocker-switch-actuator/?attribute_pa_color=red

Custom Actuator

Color: Red

Line 1: TURNTABLE

Bottom lens:

At the bottom, choose Layout 3

Line 2: leave blank

Line 3: WARNING

Symbol: 0125

Line 4: ON

----->At checkout in the Order Notes, request that symbol 0125 be printed inverted



Turntable Safety Feature	Turntable Type			
	Electric Driven (Jack) Screw	Electric Pump Driven Hydraulic Cylinder	Engine PTO Driven Hydraulic Cylinder	Manual Pump Hydraulic Cylinder
Master Electrical Power Switch for Turntable	<ol style="list-style-type: none"> 1. Must have a master power switch that will interrupt all power going to the Up/Down direction switch or to the turntable drive motor. 2. Master power switch must have a Visual Indication when the power circuit is complete (on). This Visual Indicator must be in the operator's normal view at all times. 	<ol style="list-style-type: none"> 1. Must have a switch that will interrupt power to Electric Hydraulic Pump either at the solenoid (low current) OR the main pump power (high current). 2. Master power switch must have a Visual Indication when the power circuit is complete (on). This Visual Indicator must be in the operator's normal view at all times. 	n/a	n/a
Turntable Position Alarm	<ol style="list-style-type: none"> 1. A Visual Alarm and an Audible Alarm must be triggered whenever the turntable is below 2 ½ inches above the railhead. 2. Visual and Audible Alarms must be wired or installed so that there is no way to disable them while the motorcar is in operation. 3. The Visual Alarm must be in the operator's normal view at all times. 4. The Audible Alarm must be sufficiently loud enough to be heard by the Operator during all vehicle operation. 			
Turntable Screw Retention	Early style Electric Turntables with a single attachment bolt must undergo modification (aka Willits Safety Modification)	n/a	n/a	n/a
Up/Down Controls Location	n/a	n/a	<ol style="list-style-type: none"> 1. Controls must be beyond the reach of any person in the motorcar. 2. Must have a physical means to retain position of up/down controls. 	n/a
Up Position Locking Mechanism	It is Recommended that a positive locking mechanism be installed.	Must have a 'positive locking mechanism' to prevent any part of turntable from dropping below 2 ½" above the rail head. (This is Rulebook item 2.13)		
Hydraulic Hose Inspection	n/a	It is Recommended that all hydraulic hoses be inspected routinely for leaks, softness, bulges, worn outer jackets, or other defects which could affect system performance.		
Electric Jack Replacement	It is Recommended that older versions be updated to current standards, or replaced, as there have been significant updates made to the original electric turntable design over the years.	n/a	n/a	n/a