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INSTALLATION BULLETIN # 3004

INSTRUCTIONS – INSTALLING AND WIRING THE FR20011/FR20012 POWER TRU-TELESCOPIC TILT/TELE STEERING COLUMN POWER UNIT

WARRANTY: ONE (1) YEAR FROM DATE OF PURCHASE. REPLACEMENT OF PRODUCT DEEMED DEFECTIVE BY THE FACTORY. LABOR NOT INCLUDED.

NOTE: *This does not cover the installation of the steering column. Refer to the attached steering column instructions. Install the steering column prior to installing the power unit.*

The power unit that drives the Flaming River FR20011/FR20012 Power Tru-Telescopic Tilt/Tele Steering column is simple to install and wire.

The power unit and the drive cable are durable and weather resistant. The Power Tru-Telescopic Tilt/Tele Steering column power unit can be installed in a remote location (under the seat, in the trunk, under the dash or on the firewall, etc.)

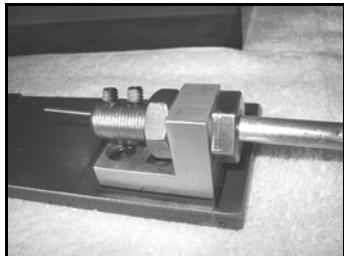
The push-pull driver cable should be installed to allow for gentle turns. However, care must be taken to assure that there is no interference or binding of the drive cable. It is best to temporarily install the power unit, wiring and drive cable with nylon cable ties.

Tools Required: 3/8" Power Drill, 3/8" High-Speed Twist Drill, Center Punch, Ball-Peen Hammer, Phillips-head Screwdriver, 3 Allen wrenches (1/16", 3/32", 1/8"), Cable Ties, 2-1/4"-20 cap screws (length determined by mounting location), 2-1/4" flat washers, 2-1/4" lock washers, 12 ga. wire terminal (type determined by the type of terminal on the fuse block's power inlet), Wiring Tool, medium-duty threadlocker.

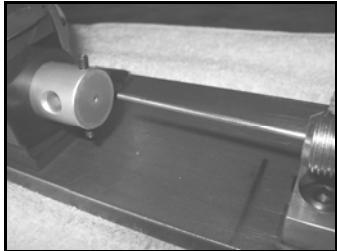
The FR20011/FR20012 Power Tru-Telescopic Tilt/Tele Steering column is shipped with the actuation cable installed to the steering column. To install the cable to the power unit, follow these simple steps.

Initial power unit installation

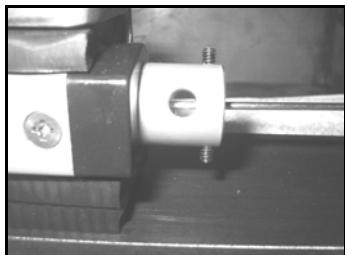
1. Open the cover of the power unit by removing the 4 screws. You will see the motor assembly and two attachment points.
2. Carefully route the cable through the outer collar



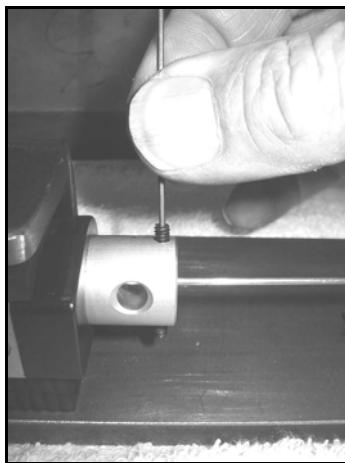
3. Insert power actuator cable into the small hole on the end of the smaller collar on motor assembly.



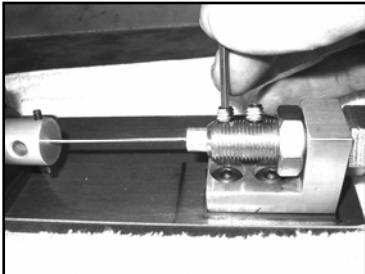
4. Using view ports in motor actuator collar, push actuator cable end until it gently bottoms out. Cable must be straight in view port, DO NOT allow cable to have a bow in the view port.



5. Tighten the two Allen set screws (use 3/32" Allen wrench) on either side of the view port.



6. Gently tighten the 4 Allen set screws on the outer collar (use 3/32" Allen wrench); snug plus 1/8 turn. DO NOT OVER TIGHTEN – this will cause the outer casing to bind the actuator shaft.



IMPORTANT!! This is a temporary installation at this point.

NOTE: If the cable is too long or too short for the power unit mounting location, carefully measure the distance required and call Flaming River Industries (800-648-8022) and order a custom length cable (up to 13 ft.).

Wiring the power unit

Wiring the power unit is very straightforward. The power unit receives all power through the switch.

Carefully route the power box wiring harness along the same path as the drive cable. After installing the controller switch in the desired location, connect the wiring harness to the switch. The wiring harness contains a 10-amp in-line fuse to protect the power unit.

To install the 3-position controller switch to the vehicle's electrical system, you **MUST** disconnect the battery's ground terminal.

Feed the red wire to the fuse block. Locate the power inlet to the fuse block. Cut the power lead wire from the switch to length (allowing for 1-2" of slack). Remove 3/16" of insulation from the wire end, attach the terminal end (not provided) and crimp the terminal end onto the wire. Remove the nut attaching the power in (Hot) lead to the fuse block, attach the wire's terminal onto the fuse block terminal, reattach the nut and tighten.

Attach the 12 gauge black wire to the ground terminal of the switch. Locate the nearest ground strap. Feed the black wire to the ground strap and repeat the process outlined above. Be certain to allow for 1-2" of slack to compensate for any chassis flex. Remove the metal screw holding the ground strap, install the terminal onto the screw, reinstall the screw and tighten firmly.

Reinstall the battery ground terminal to the battery.

Check the installation by pushing the 3-position (on-off-on) switch up and down. Properly installed, the upper end of the column should move smoothly across the two-inch range of travel. If the power unit's electric motor sounds labored as it moves the column, there is drive cable interference. Carefully check the shaft for binding. Relocate the power unit until the resistance is eliminated.

If the power unit requires repositioning, the drive cable may need to be removed from the power unit.

Permanently Mount the Assembly

When you are satisfied that the cable will operate with minimal resistance, permanently mount the box and the wiring and power cable runs.

To permanently install the power unit, mark the position of the two mount holes on the power unit base. Using a center punch, mark the location of the desired mounting holes on the mounting surface. Move the power assembly away from the mounting location. Using a 3/8" drill bit, carefully drill the required holes.

Permanently install the power unit using 2- 1/4"-20 cap screws with flat and locking washers (not supplied). **NOTE:** Cap screw length must be calculated to accommodate the 3/8" thickness of the

base, plus the thickness of the mounting surface and any optional isolator mounts used. Apply medium-duty threadlocker to the threads. The power unit base is tapped to accept the cap screws, which must be installed from the backside of the mounting surface. To isolate any possible operational noise, it may be advisable to install rubber isolators between mounting surface and the power unit.

Reinstall the cover using the 4 screws provided.

Warranty Disclaimer

Because of their intended usage, the manufacturer makes no warranties whatsoever expressed or implied, oral or written, to purchasers of their products regarding performance, safety, fit, merchantability or length of service. Purchasers are responsible for selection of proper goods and must rely on their own skill or judgment that such goods are suitable for the purchaser's application.