

Marine Steering Inspection

As with all mechanical systems used in the harsh marine environment, proper inspection and maintenance is required of an Edson Steering System for long life and years of proper service. Systems which have not been maintained and lubricated properly show signs of wear early and perform less than satisfactorily. Therefore, it is important that all boats fitted with Edson Steering Systems get an annual inspection of the critical system parts and that routine maintenance guidelines are followed. This inspection can be done by an Authorized Edson Service Center, or by the boat owner.

After each item is inspected, check the appropriate box on the **left-hand** side of the checklist. If a replacement part is required, or an upgrade part is needed, make a check in the appropriate box on the **right-hand** side of the checklist next to the Part#. After the Inspection is complete, copy those Part#'s needed onto the order page attached. This order form can then be taken to your Edson Dealer or Service Center for fulfillment.

Note: Some parts need size designations - refer to your Edson Catalog, Price Page or Specific Boat Data Sheet for sizing information. If you have any questions during the Inspection or while filling out the order form, please contact the Edson Customer Service Department between 8 AM - 5 PM Eastern Time.

Edson Steering Inspection Checklist

Please Fill Out This Section Completely.

Owners Name: _____ Boat Name: _____

Address: _____

City: _____ State: _____ ZIP: _____ Phone: () _____

Boat Type/Mfr: _____ Length: _____ Year: _____

Engine Mfr. and Type: _____ Transmission Mfr. and Type: _____

<input checked="" type="checkbox"/> Inspection Area	Action	Parts Needed	<input checked="" type="checkbox"/>
Steering Wheel/Shaft	Remove Steering Wheel for room to work		
	Inspect Wheel, Key and Snap Ring		
	Replace Key if loose in keyway	#684-250W	
	Replace Snap Ring if there are signs of corrosion	#960-A-660	
	Remove compass and cylinder (follow mfr. rec.)		
	Replace Compass Bolts if corroded	3 1/2" - #817-3.5	
	Coat Compass Bolts with Tef-Gel before re-installing.	1" - #817-1	
Engine Control	Inspect handles, levers, shafts, bushings		
	Upgrade plastic handles to stainless	Throttle - #963SB-55	
		Clutch - #963PT-55	
	Replace Delrin Bushings if deteriorated or stiff	#960-A-125	
	Inspect Engine Cables		
	Replace cables if deteriorating or stiff	#734-33-spec length	
		#735-64-spec length	
Wheel Brake	Inspect Brake. Tighten to determine if working properly		
	Visually inspect pads. Clean grease off of knurling.		
	Replace Pads if worn or ineffective	Brake Kit - #316-689	
	Upgrade plastic knob to stainless	#825ST-1	
Steering Chain/Sprocket	Inspect chain for proper lubrication and free-movement		
	Inspect visual for "star" cracking around pins		
	Lubricate with # 30 motor oil.		
	Replace if corroded, cracking or does not "roll"	#886-spec size	
	Inspect sprocket for broken, worn or bent teeth		
	Replace sprocket if broken or bent	#855-spec size	
Steering Shaft Bearings	Inspect condition of bearings by turning shaft and checking for play or resistance while chain is disconnected.		
	Replace bearings if stiff or excessive play	#314-335	
Steering Cables	Oil tissue and run along wire. Inspect Steering Cable for signs of wear such as "meat-hooks" or kinks.		
	Replace wires if there are any signs of wear	#885-spec size	
	Check cable tension. Cable should deflect 1" per foot.		
	Tighten cables at the quadrant take-up eyes if loose.		
	Inspect Conduit (if used) for worn areas or tight bends.		
	Replace if worn through	#797-250	
	Lubricate conduit with Teflon Grease if dry.	#827-3	
Continued			

<input checked="" type="checkbox"/> Inspection Area	Action	Parts Needed	<input checked="" type="checkbox"/>
Cable Sheaves/Idler	Inspect Idler Plate and Sheaves for corrosion or wear from misaligned cables. Look for metal dust under sheaves.		
	Inspect Sheave Pins for excessive wear.		
	Replace Idler, Sheaves or Pins if corroded or worn.	See Data Sheet	
Steering Cable Alignment	Correct cable alignment within the sheave system is required to insure longevity of the system. Check that Cables are centered in the groove of the sheaves and quadrant.		
	Adjust sheave placement to insure a fair wire lead.		
Quadrant / Radial Wheel	Inspect Quadrant or Radial for signs of wear or corrosion.		
	Inspect for cable wear along wire groove.		
	Inspect connection at rudderpost for tightness.		
	Inspect Rudderstop. Is it hitting supports on both sides?		
	Replace Quadrant if weakened by corrosion.	See Data Sheet	
	Replace Rubber Bumper on Stop if missing.	#960-A-534	
	Tighten all bolts clamping Quadrant on rudderpost.		
	Align Quadrant or Sheaves for fair wire runs.		
Overall Inspection	Tighten all fasteners including pedestal bolts, wire rope clamps, and quadrant rudderpost/connections.		
	Inspect Pedestal base for water leakage.		
	Seal with bedding compound if leaking.		
Lubrication	For longevity of the steering system, proper lubrication is required.		
	Lubricate Shaft Roller Bearings with Teflon Grease	#827-3	
	Lubricate Cable Conduit with Teflon Grease		
	Oil Wire Rope, Chain and Sheave Pins w/ #30 motor oil		
Upgrades	Many parts that Edson used to make in plastic are now made of Stainless Steel. Upgradeable Items include:		
	- Stainless Shift Handle	#963SB-55	
	- Stainless Throttle Handle	#963PT-55	
	- Stainless Wheel Nut	#673ST 1" or 3/4"	
	- Stainless Quick-Release Wheel Nut	#826ST 1" or 3/4"	
	- Stainless Brake Knob	#825ST-1	
	These items are easily replaced during an inspection.		
Customer information	Give your customer a copy of Edson's Pedestal Maintenance Guide and Catalog. Periodic Maintenance is very important in keeping the Steering System in like-new condition - Kits are available for routine maintenance:	Edson Catalog EB-204-3	
	- Brake Maintenance Kit	#316-689	
	- Pedestal Maintenance Kit	#312-335-400	
	- Pedestal Rebuild Kit	#314-335	

If during the steering inspection you find that the Steering Pedestal needs repainting, please request the Edson Pedestal Repainting Guide (EB-95-345). This Engineering Bulletin will outline the steps required to properly repaint or replace the pedestal as well as areas to check for possible electrolysis. Contact Edson Customer Service for this and other Engineering Bulletins.

Many of these parts are available in kits that include detailed instructions. If you are replacing several items, you may consider purchasing the Brake Maintenance Kit (#316), the Pedestal Maintenance Kit (#312) or the Pedestal Rebuild Kit (#314). These are available through Edson Dealers or Factory Direct.

When the Steering Inspection is completed, copy the Part #'s of the required replacement and upgrade parts onto the attached order form.

Steering Inspection Order Form

Please attach a copy of the completed inspection form.

COMPANY NAME:

SHIPPING ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE () _____

FAX () _____

CONTACT NAME _____

*All Shipments are made by UPS/FedEx or truck. Deliveries cannot be made to a post office box. Please include your street address.

DATE: _____

CUSTOMER NUMBER: _____

PO NUMBER: _____

(open accounts only)

IMPORTANT!

Boat Mfg. _____ Length _____ Year _____

[illegible]☐ Check or Money Order ☐ Open Account (PO# _____)☐ Visa or Mastercard

Please Print Card Number Here

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Expiration Date _____

Signature Required _____ Date _____

Merchandise Total

Mass. Residents
Add 5% Sales Tax

Shipping Charge
See Ordering Instructions

TOTAL

PEDESTAL STEERING MAINTENANCE

To properly maintain the moving parts in the top of the pedestal, it is necessary to remove the compass and its cylinder. For proper alignment when re-installing the compass, we recommend placing three or four lengths of tape on the pedestal and compass as shown below. Slit the tape when removing compass, align the strips of tape when re-installing the compass for visual realignment. Your compass MUST then be checked out for accuracy. Lubrication of needle bearings should be done by squeezing Edson Fig 827 Teflon Lubricant into the holes located on top of the bearing housings inside the pedestal bowl. Spin the wheel when squeezing the lubricant in to make sure the entire bearing is serviced. Winch grease or water pump grease can be used as an alternative, but don't let the bearings run dry. Do not over grease as it will run onto the brake pads. Oil the chain with #30 weight motor oil. Do NOT grease chain as it does not penetrate the links.

Inspect the condition of the wire, tension of the wire and lightly oil. Edson recommends placing about five layers of "Kleenex" on the palm of your hand, squirt oil on the tissues and lightly oil the wire. This will lubricate the strands but will also "flag" a broken or hooked strand by tearing off a small section of tissue. If you do have a wire break, replace the wire immediately. See Edson Fig 775 Wire and Chain Replacement Kits. (Caution: Wire splinters can cause painful cuts.) Replace the wire after 5 years. If still good, keep the old wire on board as a spare.

STEERING WIRE TENSION

A top quality roller chain to wire steering system can be kept in "as new" sensitivity by keeping the wire at a correct tension. To check for proper wire tension, lock the wheel in position by using the pedestal brake, or by tying off the wheel. Cable tension is best when you cannot

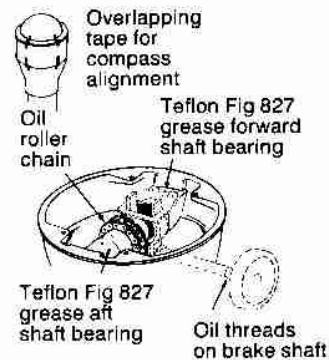
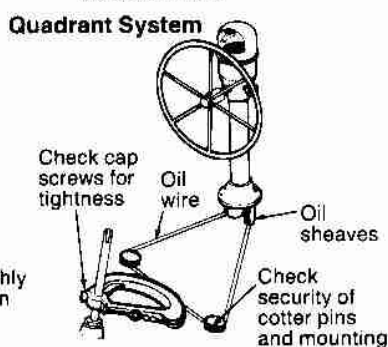
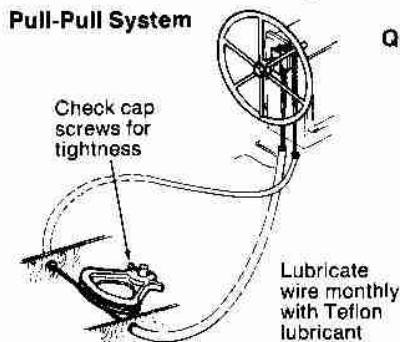
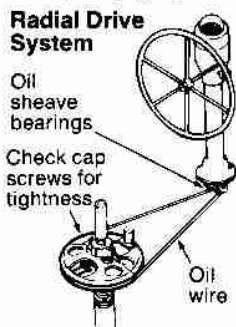
move the quadrant or drive wheel by hand with the wheel locked in place. Over tightening will greatly reduce the sensitivity of the system.

It must be emphasized that all on board must be familiar with the care and operation of the Steering System and engine controls. One person must be assigned the job of maintenance and must be thoroughly familiar with the operation and intent of all the equipment. If at any time your Steering System makes strange noises or reacts differently than it has previously, you must find the causes immediately and correct the problem.

Screws, nuts, bolts, as well as clevis and cotter pins that are part of the steering system, engine controls or pedestal accessories, must be checked regularly for tightness and wear. Failure to inspect all steering parts, engine controls and pedestal accessories may cause loss of control or failure of the engine or steering system. *All boats must have an emergency tiller or its equivalent and all on board must be familiar with its location and operation. An emergency tiller drill is just as important as a man-overboard drill and must be regularly conducted.*

On a new boat and at least once a year, inspect the system when under a strong load. On a calm day and under power, go away from the other boats and with the person who is assigned the maintenance watching from below, put the wheel hard over at full throttle. The maintenance man should watch carefully for all parts of the system bending, distorting, creaking, or giving any indication of failing if placed under a heavy load for a period of time. If, for any reason something did fail or needs adjusting, the day is early and you will have plenty of time.

When leaving your boat at her mooring or slip, make sure that your wheel is properly tied off. DO NOT LEAVE THE STEERING SYSTEM TO FREE WHEEL.



CLEANING STAINLESS STEEL

Pedestal guards, steering wheels and shafts are all made from top quality stainless steel. The implication of its name "stainless steel" does not mean it is totally rustproof. All stainless steel will rust to a certain degree due to chemical reaction to air and saltwater. This is mainly cosmetic and will require an occasional polishing with an abrasive type cleaner such as "Brasso" or equivalent.

CLEANING PEDESTAL AND ACCESSORIES

Clean them with soap and water; don't use chemicals such as MEK or acetone as they break down the super finish on your Edson pedestal

system, compasses and instruments. Most manufacturers of compasses and electronic instruments suggest that they all be removed during winter storage and kept in a warm dry area. Compasses are normally held in place by two or three slotted-head screws, placed near the top of the compass. A Fig 672 Rubber Connector will assist in removing the compass. Instruments can be removed by the screws in the Edson faceplate. Just unplug the instrument and you are all set.

CAUTION: When the equipment is in the tropics or in charter service, the maintenance schedule must be speeded up. Or, to put it in a few words: clean it up, oil it, inspect it, cover it. The effects of sun, saltwater and inexperienced operators can be severe.

LUBRICATION RECORD

component	lubricant	schedule	1st year 19____	2nd year 19____	3rd year 19____	4th year 20____	5th year 20____	6th year 20____	7th year 20____
sheave bearings	#30 oil*	check and oil monthly							
pull-pull cables	Teflon Fig 827	check and grease monthly							
wire rope	#30 oil*	check and oil annually							
roller chain	#30 oil*	check and oil annually							
pedestal shaft bearings	Teflon Fig 827	check and grease annually							

*Any light oil is suitable. We recommend #30 weight motor oil since most boat owners have it aboard.

CAUTION: 1.) On extended voyages your steering system should be inspected each day and lubricated weekly. Carefully inspect your steering system at least one week before a vacation cruise to avoid last minute maintenance.
2.) When the boat is unattended secure the wheel with the brake or a line. In rough weather the rudder can swing violently from stop to stop causing damage.

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As a further service to our customers we have an illustrated parts breakdown showing the design and construction of your Edson Pedestal Steerer. These parts drawings will assist you in the proper maintenance of your steering system.

If disassembly should become necessary, the following instructions will provide a simple but precise method of removing and replacing the steering shaft and its components.

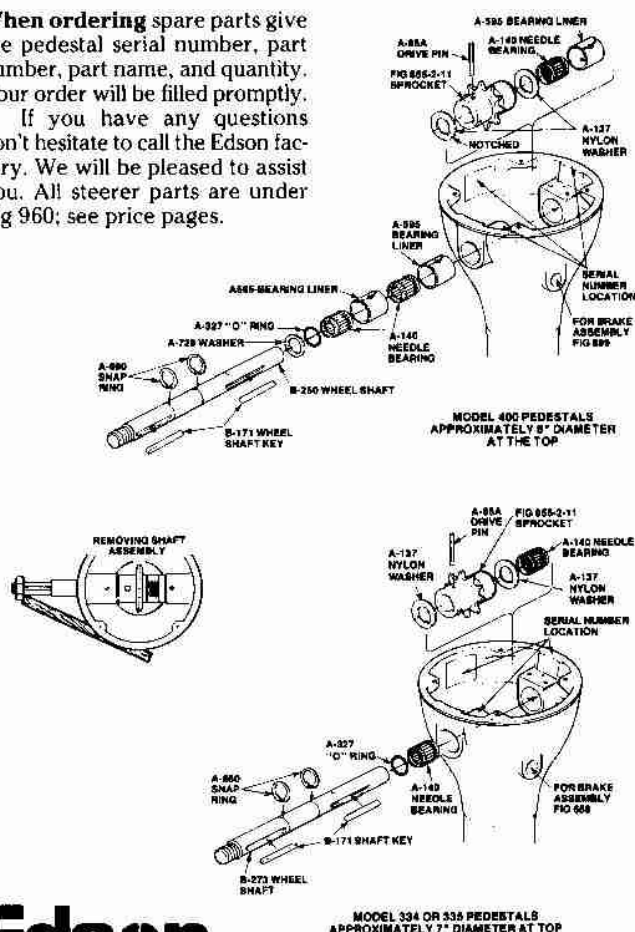
DISASSEMBLY

1. With the wheel and brake assembly removed, replace the wheel nut with any standard thread $\frac{3}{4}$ " or 1" hex nut.
 2. Loosen the steering cables and chain by backing off the take-up eyes at the Quadrant or Radial Driver, lift the chain off the sprocket and tie to the forward part of the bowl.
 3. Put a cloth just under the sprocket so no parts drop down.
 4. Align the notch in the aft nylon washer with the "V" stamped on the sprocket.
 5. Carefully drive the pin out of the sprocket (drive from the round end toward the grooved end).
 6. With a piece of wood against the $\frac{3}{4}$ " or 1" hex nut, gently tape the wheel shaft from the housing (see illustration); be careful not to drop the shaft components into the pedestal.
 7. Remove the sprocket, two nylon washers and forward needle bearing.
 8. Remove aft needle bearing and washers.
 9. Wipe out any dirt or old grease before reassembly.
- To reassemble, reverse the above procedure; do not grease the bearings until reassembly is completed.

NOTE: Check your compass for possible readjustment.

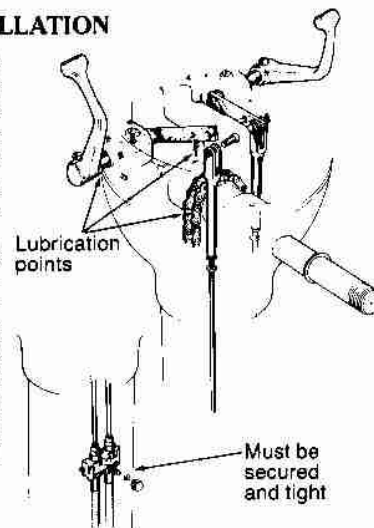
When ordering spare parts give the pedestal serial number, part number, part name, and quantity. Your order will be filled promptly.

If you have any questions don't hesitate to call the Edson factory. We will be pleased to assist you. All steerer parts are under Fig 960; see price pages.



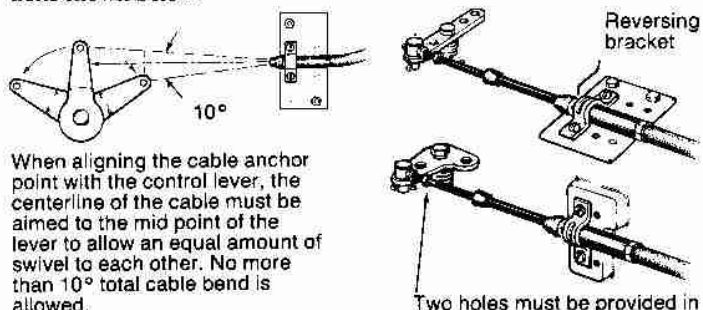
ENGINE CONTROLS INSTALLATION

Great care must be taken to assure ease and safety of engine controls operation. Components must be installed and adjusted so the engine goes into gear smoothly and completely, and the throttle operates easily. Cables must be installed straight or in broad curves. Refer to the Engine Connections illustrations (opposite) for installation procedures. Don't force engine controls when operating above idle. Force-shifting can result in broken cables and loss of boat control. Familiarize yourself with the operation of the engine controls. Caution and train all those on board.



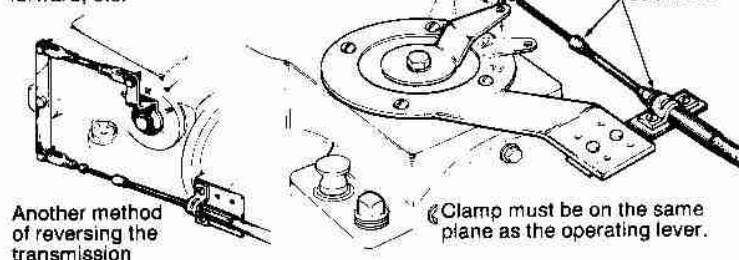
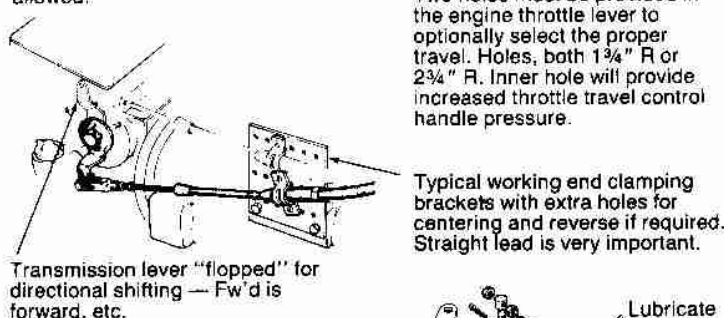
ENGINE CONNECTIONS

NOTE: Use the information below as a guideline. Most engine and control cable manufacturers furnish instructions for installing their products. Use their instructions if there is any variance with the instructions shown below.



When aligning the cable anchor point with the control lever, the centerline of the cable must be aimed to the mid point of the lever to allow an equal amount of swivel to each other. No more than 10° total cable bend is allowed.

Two holes must be provided in the engine throttle lever to optionally select the proper travel. Holes, both $1\frac{3}{4}$ " R or $2\frac{3}{4}$ " R. Inner hole will provide increased throttle travel control handle pressure.



ENGINE CONTROLS MAINTENANCE

Oil the control handle shaft bearings with #30 motor oil. Use a good grade of Teflon spray with an extender nozzle for the pedestal end of the engine control push/pull cables.

At the engine, clean off the control cable metal ends and spray with Teflon grease. This will increase cable life and make operation easier. Engine cables are subject to high heat from the transmission, and salty bilge water, both very hard on moving parts. If stiff, replace.

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