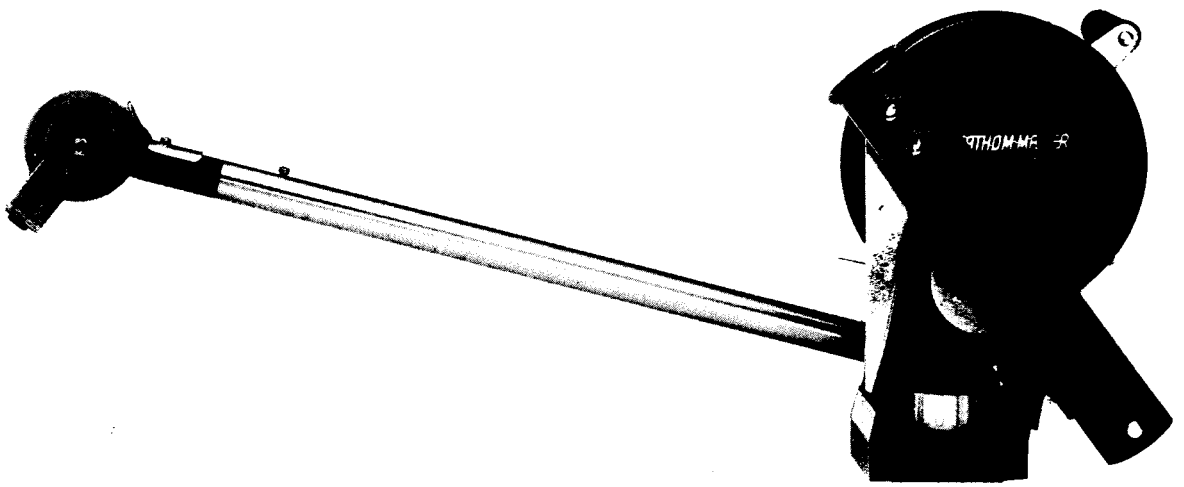
PENN REELS®

Penn Reels

FATHOM-MASTER®

600-625 DOWNRIGGER
FOR DEEP TROLLING



OWNER'S MANUAL

PLEASE TAKE TIME TO
CAREFULLY READ THIS MANUAL.
PLEASE KEEP THIS MANUAL SAFE
AND DRY FOR FUTURE REFERENCE.

INSTALLATION
HOW TO USE
MAINTENANCE
PARTS
ACCESSORIES

PENN FISHING TACKLE MFG. CO., 3028 W. HUNTING PARK AVE., PHILA., PA. 19132 MADE IN USA

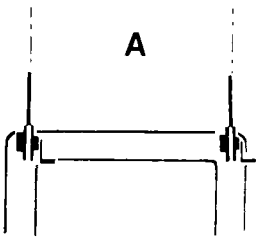
INSTALLING THE 600/625 MANUAL DOWNRIGGER

RECOMMENDED FATHOM-MASTER® 600 INSTALLATION METHODS

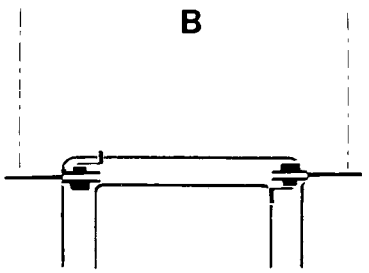
READ MANUAL CAREFULLY BEFORE DRILLING HOLES

SELECTING LOCATION

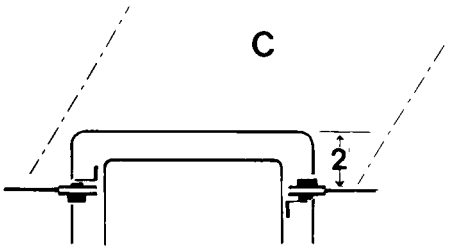
1. Ease of accessibility to operate the downrigger and rod/reel. Have someone else firmly hold the downrigger in the position you select and go through the motions of using it while handling a rod/reel at the same time. Pretend that a fish was hooked and you have to get quickly to the downrigger and rod/reel. The model 600 can be mounted on the transom or either side of the boat. The boom pulley automatically swivels to the pull of the cable.



A. Standard mounting method—where access to transom corners is easy.



B. This mounting method separates the two cables more than the standard method. This method keeps the cable farther from the outboard engines, swimming platform, etc., allowing the boat to make tighter turns.



C. When mounting model 600 downriggers forward of the transom do not exceed a distance of 2 ft. (610mm). Going beyond this distance will affect the turning radius of the boat while deep trolling.

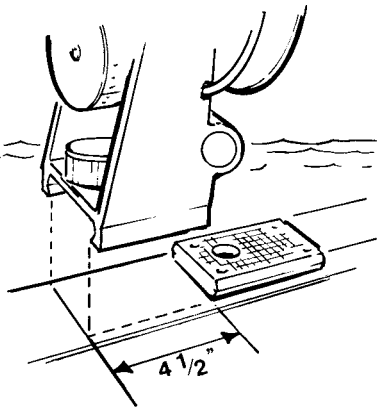
PENN OFFERS FOR YOUR CONVENIENCE AN OPTIONAL ACCESSORY THAT MAY PERMIT YOU TO QUICKLY MOUNT YOUR 600 DOWNRIGGER. THIS ACCESSORY UTILIZES AN EXISTING FLUSH-MOUNT ROD HOLDER ON YOUR BOAT. (QUICK-MOUNT™ JR. 632 OR QUICK-MOUNT™ SR. 634) (SEE PAGE 15).

Model 600 downriggers can also be mounted at an angle off the transom (boom tip pulley automatically tracks with cable). If mounting four downriggers, Penn recommends two 625 (long boom) models off the gunwale (outrigger style) and two 600 (short boom) models off the transom. This mounting method will provide adequate clearance between the downriggers.

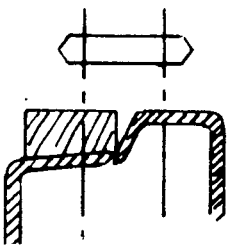
2. Strive for maximum clearance of the boom tip away from the boat. While using the downrigger during rough sea conditions, the trolling weight will have a tendency to swing around when coming out the water.

PENN OFFERS AS AN OPTIONAL ACCESSORY A SINGLE ROD HOLDER WHICH ATTACHES TO THE DOWNRIGGER FRAME, 610 RH.

3. The top surface of the base plate on the swivel base has a raised ridge on one end of the plate. The purpose of this ridge is to locate the downrigger in the proper position so that the hold-down knob can be tightened down into the base plate. The downrigger will slide on or off only at the opposite end of the raised ridge.



4. A clearance of 4¼" (107.95mm) is required between the end of the base plate (opposite the ridge) and any obstruction (ie: cleats, navigation lights, etc.) for the downrigger to be installed or removed.



5. The base plate measures 4½" (114.3mm) long and 3¼" (82.55mm) wide and requires a flat mounting surface (not necessarily level). Be sure that there is an additional ½" (12.70mm) clearance on both sides of the length of the base plate. If a flat mounting area does not exist where you want to install a base plate you can custom fit a wood spacer block.

INSTALLING THE 600 BASE PLATE

1. After selecting the location of the base plate check underneath the gunnel that there is sufficient space for the 4 mounting nuts and washers.

Note: For your convenience Penn supplies the stainless steel mounting hardware, 4 bolts ¼ × 20 with nuts and washers.

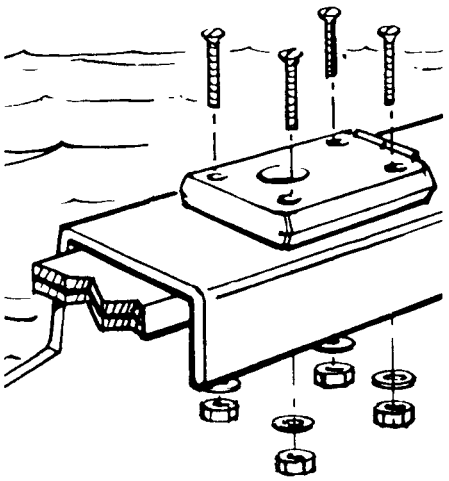
If thru-bolting of the base plate is not practical consult with your dealer for other methods of securing it to the deck; toggle bolts, screws, etc. If at all

possible try to use at least 2 thru-bolts.

Before drilling holes make sure that the drill will not cut or puncture electrical wiring, steering cable, fuel hoses, etc.

Note: If you use a different method of securing the base plate to the deck the 4 holes might be another diameter. Example: If you use #14 wood screws the hole diameter would be $\frac{3}{16}$" (4.762MM) or smaller.

2. Use the base plate as a template for drilling four $\frac{1}{4}$" (6.35mm) holes.



3. A backing plate is recommended; for some makes of boats it is a must. Use at least $\frac{1}{2}$" (12.70mm) thick exterior grade plywood, pressure treated wood or other suitable material. The purpose of the backing plate is to reinforce the gunnel area around the base plate.

4. Before bolting down the base plate check that it is properly positioned in regard to the raised ridge. Be sure that the base plate nut is taped to the bottom side of the plate.

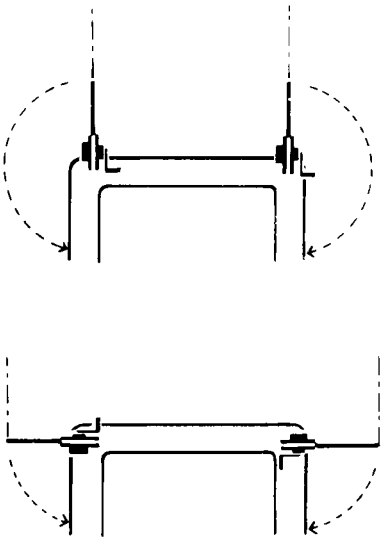
RECOMMENDED FATHOM-MASTER® 625 INSTALLATION METHODS

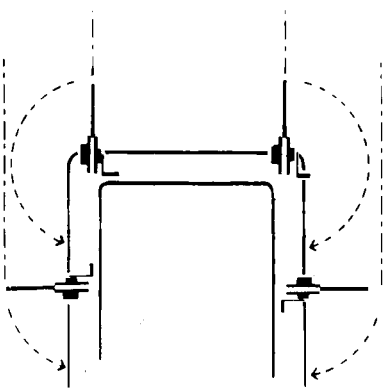
READ MANUAL CAREFULLY *BEFORE* DRILLING HOLES

SELECTING LOCATION

SELECT MOUNTING LOCATIONS FOR YOUR FATHOM-MASTER® 625 USING THE FOLLOWING SUGGESTIONS:

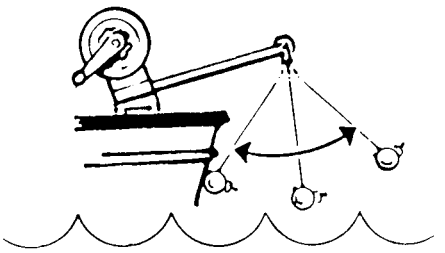
1. Ease of accessibility and clearance to operate the downrigger and rod/reel. Have someone firmly hold the downrigger in the position you select and go through the motions of using it while handling a rod/reel at the same time. Pretend that a fish was hooked and you have to get quickly to the downrigger and rod/reel. The model 625 can be mounted on the transom on either side of the boat. The boom pulley automatically swivels to the pull of the cable when turning the boat.

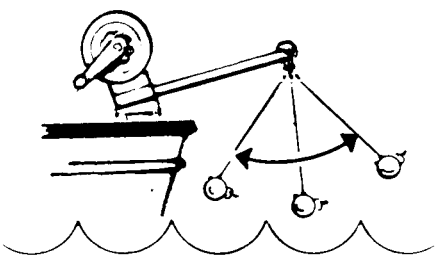




PENN OFFERS FOR YOUR CONVENIENCE AN OPTIONAL ACCESSORY THAT MAY PERMIT YOU TO QUICKLY MOUNT YOUR 625 DOWNRIGGER. THIS ACCESSORY UTILIZES AN EXISTING FLUSH-MOUNT ROD HOLDER ON YOUR BOAT. (QUICK-MOUNT® JR. 632 OR QUICK-MOUNT® SR. 634) (SEE PAGE 15).

2. Strive for maximum clearance of the boom tip away from the boat. While using the downrigger during rough sea conditions, the trolling weight will have a tendency to swing around when coming out the water.





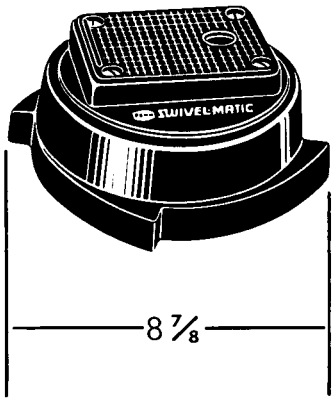
PENN OFFERS AS AN OPTIONAL ACCESSORY A SINGLE ROD HOLDER WHICH ATTACHES TO THE DOWNRIGGER FRAME.

3. The top surface of the base plate on the swivel base has a raised ridge on one end of the plate. The purpose of this ridge is to locate the downrigger in the proper position so that the hold-down knob can be tightened down into the base plate. The downrigger will slide on or off only at the opposite end of the raised ridge.

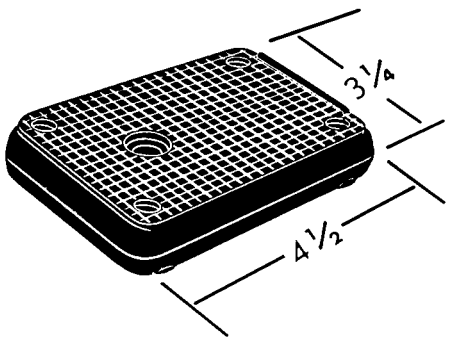
4. A clearance of $4\frac{1}{4}$" (107.95mm) is required between the end of the base plate (opposite the ridge) and any obstruction (ie: cleats, navigation lights, etc.) for the downrigger to be installed or removed.

5. The adjustable swivel base bottom half is $6\frac{1}{8}$ (155.6mm) in diameter and requires a flat mounting surface (not necessarily level).

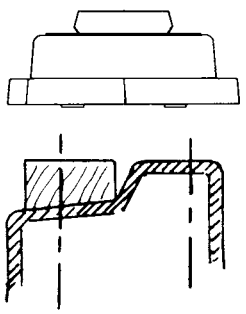
Adjustable Swivel-Matic Base 622 ASM



Penn Fathom-Master Fixed Base Plate 133C-600SP



6. If a flat mounting area does not exist where you want to install the adjustable swivel base you can custom fit a wood spacer block.



7. The 625 boom requires 50" (1270mm) clearance to rotate from the non-fishing position to the trolling position. Be sure no obstructions would interfere. While doing this, also check that the frame clears any obstructions.

INSTALLING THE 622 ADJUSTABLE SWIVEL BASE

1. After selecting the location of the swivel base, check underneath the mounting surface to make sure that there is enough clearance for a backing plate and mounting hardware. Some types of boats may not provide easy access to this underside area. If this is your case, you can cut an access hole and install a cover over the hole. Check with your local marine supplier for details.

> Note: For your convenience, Penn supplies the stainless steel mounting hardware, 4 screws (¼ × 20) with stainless steel nuts and washers.

If the selected area on your boat is not suitable for through-bolting the base, consult with your marine supplier for other methods of installation (toggle bolts, lag bolts, oversize screws, etc.). Four through-bolts are best. If at all possible, try to use at least two through-bolts.

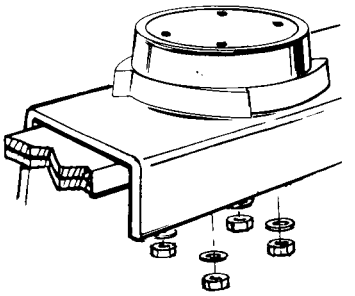
2. Use the swivel base cover (24) or the base plate (26) as a template to mark the holes to be drilled. Notice that the four marks form a rectangular pattern (not a perfect square). It does not matter which way the hole pattern is positioned on your boat in order for the 622 swivel base to operate correctly, since it swivels in a complete 360° circle. Make sure that the hole pattern is positioned so that you will have enough clearance to install the mounting hardware. When making your marks, be sure to hold the cover plate or base plate securely to keep it from shifting and to insure that your holes will be "on target".

3. Drill four ¼" (6.35mm) holes in your selected location (if through-bolting all four holes). For the most accurate installation, drill four smaller "pilot" holes before drilling your ¼" holes.

Before drilling, make sure that the drill will not cut or puncture electrical wiring, steering cable, fuel hoses, etc.

> Note: If you use a different method of securing the swivel base to the mounting surface, the four holes might be different diameters.

Example: If you use #14 wood screws, the hole diameter would be 3/16" (4.762mm) or smaller, instead of ¼".



4. A backing plate is recommended; for some makes of boats, it's a must. Use at least ½" (12.70mm) thick exterior grade plywood, pressure treated wood or other suitable material. The purpose of the backing plate is to reinforce the deck area around the swivel base.

5. The 622 Adjustable Swivel Base comes already assembled. Note the oval-shaped hole on the swivel base top. The oval hole provides access to each of the four mounting screws.

The adjusting ring is toward the bottom of the swivel base. It has four finger grips (shark fins). First pick the base up, and insert the fingers of your left hand (if right handed) into the bottom of the swivel base. With your left thumb, push the adjusting ring counter-clockwise until you feel a positive stop (about 1"). With the adjusting ring in this position, you can now turn the swivel base top. You may hear and feel some soft clicks as you turn the swivel top, which is OK. Once the 622 is installed, you won't hear any clicks as you adjust the base (if you operate it properly). Turn the swivel top until the oval access hole is above a mounting screw hole. You should be able to peek right through the swivel base assembly. At this point, release the adjusting ring to lock the swivel base top in position.

Carefully match this mounting hole with the proper one of the four holes you just drilled. Be sure that your swivel base is positioned so that the rectangular pattern of the swivel base holes will match your drilled holes. Insert the first mounting screw through the swivel base and mounting surface.

6. To insert the next mounting screw, push the adjusting ring counter-clockwise until it stops, and holding that position, turn the swivel base top so that the oval access hole is over the next mounting screw hole. Again, you may hear and feel some soft clicks as you work the swivel top toward the next hole. Release the adjusting ring to lock the swivel base top in position. Drop another mounting screw through the base and mounting surface.

7. Repeat step 6 for inserting the third and fourth mounting screws. Just push the adjusting ring counter-clockwise until it stops, and you should now be able to turn the swivel base top easily in either direction, without hearing or feeling any soft clicks. (This is because the first two screws have sufficiently anchored the bottom of the base.) After inserting all of the mounting screws, double check that the screws are properly seated into the swivel base.

8. Position the recommended backing plate underneath the mounting surface and install the washers and nuts on to the mounting screws. Tighten securely but do not over-tighten. For best results, tighten opposite screws as you go, similar to screwing lug nuts on a car tire.

9. Position the swivel base cover and base plate on top of the swivel base (make sure that the base plate nut is taped to the bottom side of the plate). Install the base plate mounting screws firmly, but do not over-tighten. Again, tighten opposite screws as you go, lug-nut style (See step 8).

Note: Penn supplies the four stainless steel base plate mounting screws.

10. The 622 Adjustable Swivel Base rotates to any one of 36 different positions, providing a full circle (360°) of rotation. To adjust, push one or more of the finger grips (shark fins) on the adjusting ring counterclockwise until it stops (about 1 inch). While holding the adjusting ring in this "adjust" position, turn the downrigger into the desired position. Release pressure on the adjusting ring, and the 622 will snap into that position. Remember, to turn and adjust the 622, you must first push the adjusting ring counterclockwise until it stops.

11. After fishing with the 622 Adjustable Swivel Base, you may want to change the base's drag tension (rotates too easily or too hard). Remove the base plate and swivel base cover, and adjust lock nut, using a 3/4" socket or box wrench. The lock nut is located in the center of the swivel base top.

12. Although there should be no need to disassemble the 622 Adjustable Swivel Base, except perhaps for occasional internal maintenance and lubrication, you should use the exploded view as a guide. After removing the base plate and swivel base cover, remove the lock nut with a 3/4" socket or box wrench. Then lift off the entire swivel base top, locking ring, and adjusting ring. When removing the adjusting ring, be careful not to lose the two return springs.

During maintenance, make sure that all inside surfaces are clean and dry, then thoroughly lubricate the brass shaft in the center of the swivel base bottom with waterproof grease. Clean the two return springs and lubricate with a light oil.

In order to re-assemble the 622, begin by installing the (2) return springs into the (2) longer pockets, which are located opposite each other on the swivel base bottom.

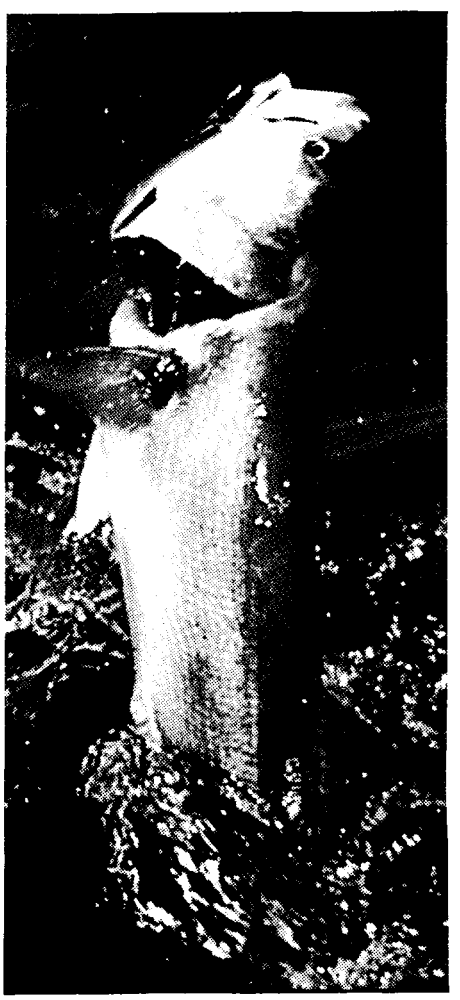
Next, locate the small circular indentations on the swivel base bottom and adjusting ring. Line these indentations up, and carefully lower the adjusting ring onto the swivel base bottom. While applying downward pressure, slowly rotate the adjusting ring clockwise until it drops fully into position. Check to be sure that the cam followers (raised bumps) on the adjusting ring are lined up with the vertical channels on the swivel base bottom.

Next, slide the serrated locking ring onto the swivel base bottom. Position is not important, as long as the teeth point up.

Look inside the swivel base top and make sure that the large white plastic washer is snapped in place. The notch on the washer should be lined up with the oval access hole on the swivel base top.

Carefully place the swivel base top onto the brass shaft, and secure with the lock nut and hardware. (Use the exploded view as a guide for correct installation of lock nut hardware.) Check that the 622 Adjustable Base is operating properly by pushing the adjustable ring counter-clockwise until reaching a positive stop. Holding that position, the swivel base top should rotate easily and quietly. Release the adjusting ring to return it to the locked position.

Before re-installing the swivel base cover and base plate, coat the base mounting screw threads and base plate nut threads with waterproof grease. When re-installing hardware, secure tightly, but be sure not to over tighten.



HOW TO USE YOUR FATHOM-MASTER® DOWNRIGGER

PRE-TRIP CHECKOUT

Before each trip, check the overall operating condition of your downrigger. Pay particular attention to the condition of the cable, especially near the terminal hardware. This is where 95 percent of the cable breaks occur.

If cable is kinked or frayed, remove that section and re-rig cable hardware. Kinks result in weakened cables and frays will never get better; if not promptly remedied, both conditions will eventually lead to a lost trolling weight.

Closely examine the condition of your cable hardware. A chain is only as strong as its weakest link. The same is true with your downrigger cable. The weakest link in this case is your cable hardware connection, so we cannot over emphasize the importance of frequent checking.

Penn strongly recommends that you use its Tru-Trac Cable Hardware System (part #213-825SP) for this vital connection. This system allows you to re-rig the end of your cable as often as necessary. See the instructions included with Penn's Tru-Trac Cable Hardware. A wedge holds the cable in the cable hardware body, and removal of this wedge is easy. Just pull the wedge out with standard pliers, re-rig, and reinsert the wedge. Extra wedges (part #290A-825SP) are available once the original wedge gets too chewed up by your pliers.

TO THE FISHING GROUNDS

If you anticipate a long run or rough seas on the way out, you may want to consider keeping the units stowed until you reach the fishing area. Or you may prefer to mount your downrigger before you are under way.

Either way, begin by sliding the downrigger on to its base by pushing it until the downrigger stops against the base's raised ridge. Push down and then turn the hold down knob clockwise until it catches the nut in the base plate. Tighten until hand tight. Be careful not to over tighten, because it may be hard to loosen the hold down knob later. However, make absolutely sure the hold down knob is tightened securely by hand. If you merely slide the rigger in place and forget to tighten the knob, the downrigger could slide off its base while you are under way and you could lose it overboard. Remember, check your hold down knob!

Either keep your trolling weights stowed until you are ready for deep trolling or, if you prefer, attach the trolling weight to the cable hardware's snap swivel. Loosen the drag, place the trolling weight on the cockpit deck and re-tighten the drag to prevent it from rolling around while under way.

Whether you head out for the fishing grounds with or without the trolling weight attached to the unit, always keep sufficient drag tension to prevent the weight from rolling or the cable from coming off.

PENN'S FATHOM-TROL® CANNONBALL WEIGHT (10W) FEATURES A FLAT BOTTOM TO RESIST ROLLING. SEE ACCESSORIES PAGE FOR MORE FEATURES AND DETAILS ON PENN'S FATHOM-TROL® WEIGHT.

Do not attempt to mount the downrigger with the weight already attached. Damage to the hold down knob can occur and, besides, mounting a downrigger with a weight is just too unwieldy; you may lose everything overboard. Take your time and take it easy.

SETTING-UP

When you are ready to go deep trolling with your Fathom-Master®, hold the attached trolling weight near the boom tip. (If you have a 625, swing the boom inboard to rig up the weight. If you have a 600, you can just reach overboard to rig up the weight.) Make sure the cable is not fouled and wind in any slack cable.

Tighten the drag to make sure there's sufficient tension to prevent accidental descending of the trolling weight.

Pay out the desired length of line/lure from your fishing reel; then attach the fishing line to the trolling weight's release mechanism.

The fishing reel should be in free spool with click engaged, or the spool can be kept engaged with a very light drag setting. Either action will prevent the reel's spool from overrunning while the weight/lure is descending.

The length of fishing line let out, leader length, lures, attractors, trolling depth, etc. will vary with different locales and fish species. Since this is local information, check with area tackle shops and fishermen for advice.

Penn's 10-lb. trolling weight is a standard weight for general all-around deep trolling. Weights heavier than 10 lbs. may be used on Penn's Fathom-Master downriggers, but they should not exceed 14 lbs.

ADJUST THE COUNTER CUP

Adjust the counter cup so that when the weight is at water level, the counter reads zero (0). The Fathom-Master® counter system is easy to adjust: merely turn the cup with your hand in the proper direction until zero (0) lines up with the white indicator spot on the frame. Because it is gear-driven, the counter cup is extremely accurate for showing the amount of cable let out.

LOWERING WEIGHT/LURE

To lower the weight/lure, release the tension on the drag knob. Slowly turn the drag knob counter-clockwise for less tension, clockwise for more tension. While the weight/lure is descending, check that the fishing line, cable, etc. is paying out smoothly and that there are no tangles. If there are any tangles, stop the descent immediately, and correct the situation.

When you reach the desired depth, stop the descent by increasing the drag tension. Just use sufficient drag to keep the downrigger's spool from turning while trolling. Wind excess line back onto the fishing reel until the rod tip bows down-ward.

Never keep the drag knob too tight while deep trolling. The Fathom-Master® drag operates much the same as the drag on a fishing reel. If the trolling weight should snag on the bottom or some obstruction, the drag will slip and pay out cable. This allows the boat operator time to stop the boat and retrieve the trolling weight.

If you snag with an overtight drag, you could break the cable or damage the boom or downrigger unit. Keep an eye on the red dots on the downrigger spool; their purpose is to verify that the downrigger spool is not moving while deep trolling. If it is, you're snagged on to something!

The boat operator must employ the same techniques as a fisherman with a snagged lure when trying to remove a snagged trolling weight. Usually a gentle turn of the boat and a pull in the opposite direction (or going in reverse if cable clearance is adequate) will retrieve the weight. Raise other downrigger weights before trying to free the snagged weight.

Being gentle and exercising finesse while trying to fish out a snagged weight will do more than brute force.

Fishing out a snagged weight is usually not much of a problem if you're calm and systematic and everyone on the boat operates as a team. Be sure to carefully check the cable, weight, and hardware before you resume deep trolling.

When a fish strikes, the rod will dip up, because the fish has tripped the trolling weight's release mechanism and released the rod's downward bow. Remember to push the click button off on a conventional reel to save wear on the clicker.

DEEP TROLLING

Instructions on proper use of the Penn Offshore Release System are included with the release packaging. This release is simple, reliable and completely adjustable. Spring loaded rubber pads hold any fishing line firmly, without damaging the line, yet allow for a positive release every time. You can easily adjust it to a wide range of lures and baits. For a lighter release, place your line just inside the pads. For a heavier release, place your line farther back in the pads. For situations requiring extra holding power, wrap a strong rubber band several times over the jaws of the Penn Offshore Release.

Usually a release is too loose when you get a "false" trip: the release trips, but there's no fish on. The release is too tight if your line breaks after a large fish strikes or if you're dragging and "drowning" small fish after the strike.

That's one reason to frequently check your lures while deep trolling. You should also be checking to make sure lures are not fouled, that they are swimming properly, the leader's not fouled, etc.

Once a fish strikes and trips the release, crank the weight topside as soon as possible. Otherwise, the fish may tangle on the cable and break off. If no one else is availabe to raise the weight, you can crank the weight up yourself even while you have a fish on. Penn's oversize downrigger spool and handle make it easy to raise the weight topside.

Penn recommends stopping the weight's ascent when the trolling weight is still in the water, perhaps a foot or two deep, no matter where your release is located. Try to keep the trolling weight from swinging in the air while you are re-rigging, fighting a fish, etc., because a swinging weight is murder on the finish of your boat's hull. Besides that, a swinging weight will also twist and turn, which helps weaken your cable hardware connection.

Extra fixed base plates (see accessories) are great for storing your Penn Fathom-Master® downriggers in safe, out-of-the way spots (basement wall, etc.).

MAINTENANCE

EXTERNAL MAINTENANCE

Your Fathom-Master® downrigger is constructed of the most durable materials available and carefully assembled in the quality tradition of Penn Reel products.

Periodic servicing will assure trouble-free use and long product life.

1. After each day of use, *especially after salt water fishing,* the downrigger should be thoroughly washed off with fresh water. All of the exposed metal parts, boom, boom tip and especially the cable should be washed down thoroughly.
2. The boom pulley and swivel assembly friction areas should be sprayed with anti-corrosion oil every few weeks.
3. The threaded portion of the hold down knob (2) should be sprayed with anti-corrosion oil every few weeks.
4. Twice a year, before and after the fishing season, remove the boom screws (53). Remove and replace one at a time and coat the threads with waterproof grease. This will prevent corrosion of the stainless steel screws and the threaded holes in the aluminum boom(s).
5. Twice a year remove the handle knob shaft (47) from the handle (42) by turning the screwdriver *clockwise.* Thoroughly coat the threaded portion of the shaft with waterproof grease. To reassemble, turn the screwdriver *counter-clockwise.*

INTERNAL LUBRICATION

At least once a season, lubricate the inside of your Fathom-Master® downrigger. Use the exploded view as a guide to remove the spool and thus gain access into the internal components.

First, remove the handle screw (45), the handle lock nut (44), and the slot washer (43). To remove the handle (42), keep turning the drag knob counter-clockwise until the handle (42) is pushed off the main sleeve (33). Penn recommends placing the downrigger so that the spool is facing upward and is horizontal. Use a spacing block to prop up the downrigger to a level position. When installing the drag washers, the level

position allows the washers to lay flat. Remove the spool and drag system. Remove and clean (or replace) the drag washers according to the sequence in the exploded view, but be sure to re-assemble the drag system DRY. Do not lubricate, as all Penn drag systems operate on a friction principle. To lubricate the drag would be like oiling the brakes on your car!

Remove the two counter cup gears (54) by carefully sliding off the two idler gear retaining rings (56). The dog ratchet (29), dog spring (30), ratchet (31) and main sleeve (33) are now fully exposed. Wipe off old grease/oil on frictional surfaces of the dog, ratchet and sleeve assemblies, and re-lubricate with a quality, waterproof grease, such as Penn's Blue Grease.

If a retaining ring plier is available, you can completely remove the dog ratchet (29) from the dog pin and thoroughly clean/lubricate the dog. Do not attempt to remove or install the retaining ring (28) by using makeshift tools.

Wipe off any old grease/oil on the two exposed counter gear pins and re-lubricate. Clean and lubricate teeth on counter gears, then re-install. Put a light film of grease on the main sleeve only where the spool rotates. For a more thorough cleaning/lubrication of the main sleeve (33), first remove the main sleeve pin (32) by knocking it out. Penn suggests using a rod, softer and smaller in diameter than the pin, for removal. Support the sleeve on a flat area while doing this. Once the pin is removed, clean/lubricate the main sleeve stud and main sleeve (only where the spool rotates) with a waterproof grease like Penn's Blue Grease.

After cleaning, lubricating, and reassembling the downrigger's internal components, re-install the spool on the main sleeve. If necessary, clean/lubricate the spool's gear when re-installing. Put a light film of waterproof grease on the exposed threads of the main sleeve as well as on the flats on the sleeve (where the handle is attached).

Re-install the drag knob by turning it clockwise until the two flats on the main sleeve (33) are fully exposed. Turn the drag knob clockwise one additional turn. Check that the drag is working properly before putting on the handle (42). If the drag does not work properly, re-check the sequence of washers and that they are seated properly.

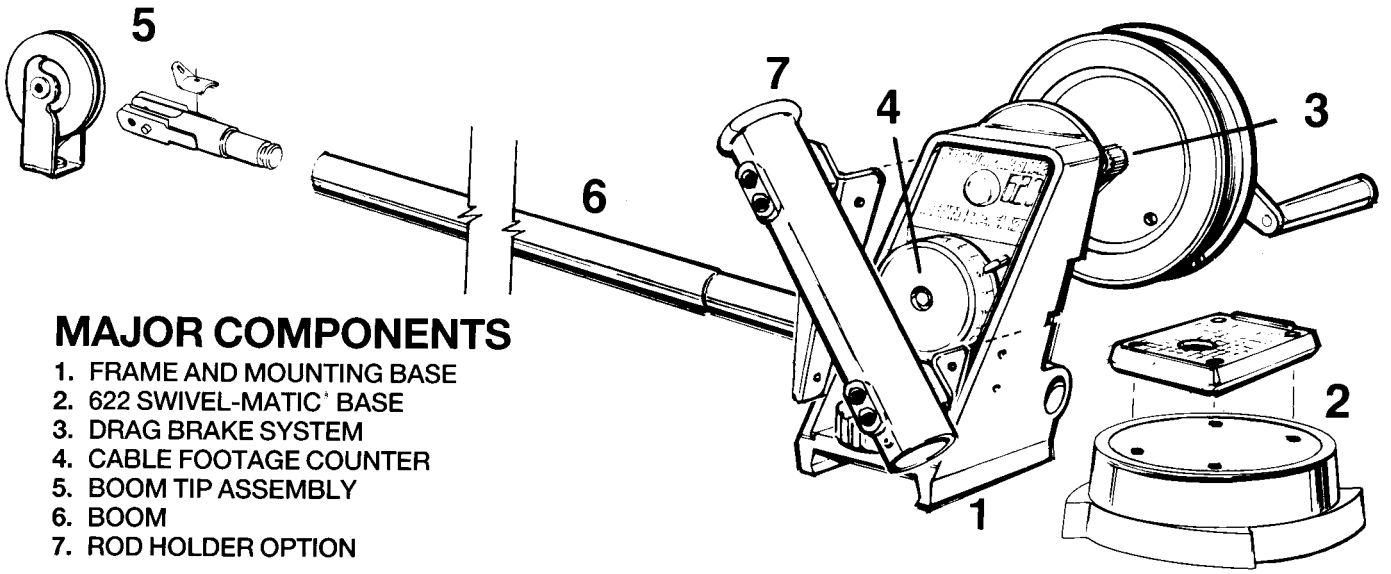
Before installing the handle (42) on the main sleeve, put some waterproof grease around the inside of the handle's hole. Press the handle on the main sleeve by aligning the flats on the handle with those on the main sleeve.

Finish installation by cleaning, lubricating and attaching the slot washer (43), the handle lock nut (44) and the handle screw (45). Secure the handle nut firmly, but do not over-tighten. Lightly grease the threads on the handle screw before installing. Secure firmly, but be careful not to overtighten.

Note: Numbers in parentheses appearing after parts description show the number of identical parts needed for that particular sub-assembly. It does not mean you will automatically receive that number of parts when you order the part. Always specify the number of parts you need. Example: in key no. 55, idler gear, part no. 178-600, two idler gears are needed in that sub-assembly. If you only need one idler gear, order 1# 178-600. If you need two, order 2# 178-60.

Complete, in parentheses after the description, means that you will receive the entire sub-assembly when you order that part.

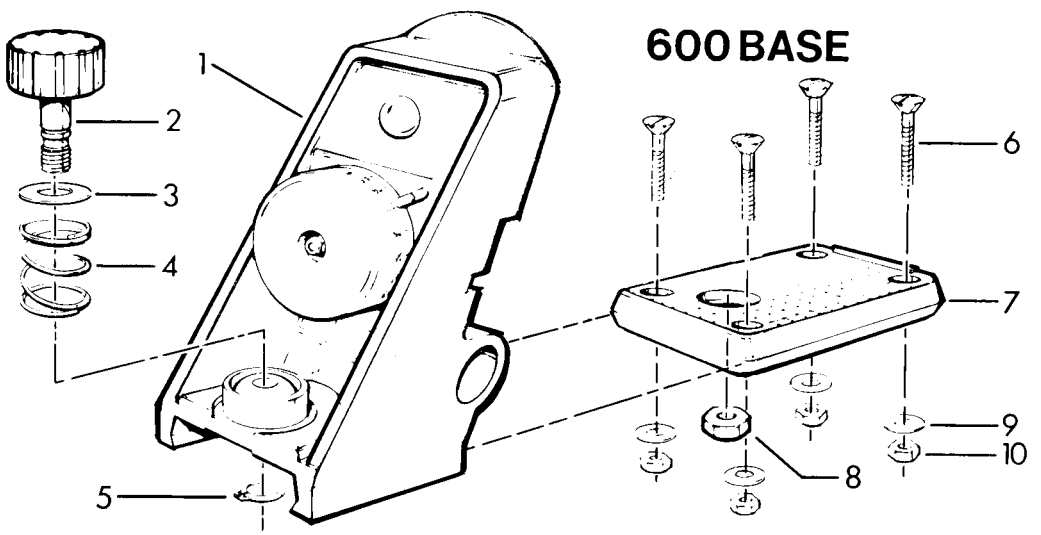
FATHOM-MASTER® PARTS & ASSEMBLY GUIDE



MAJOR COMPONENTS

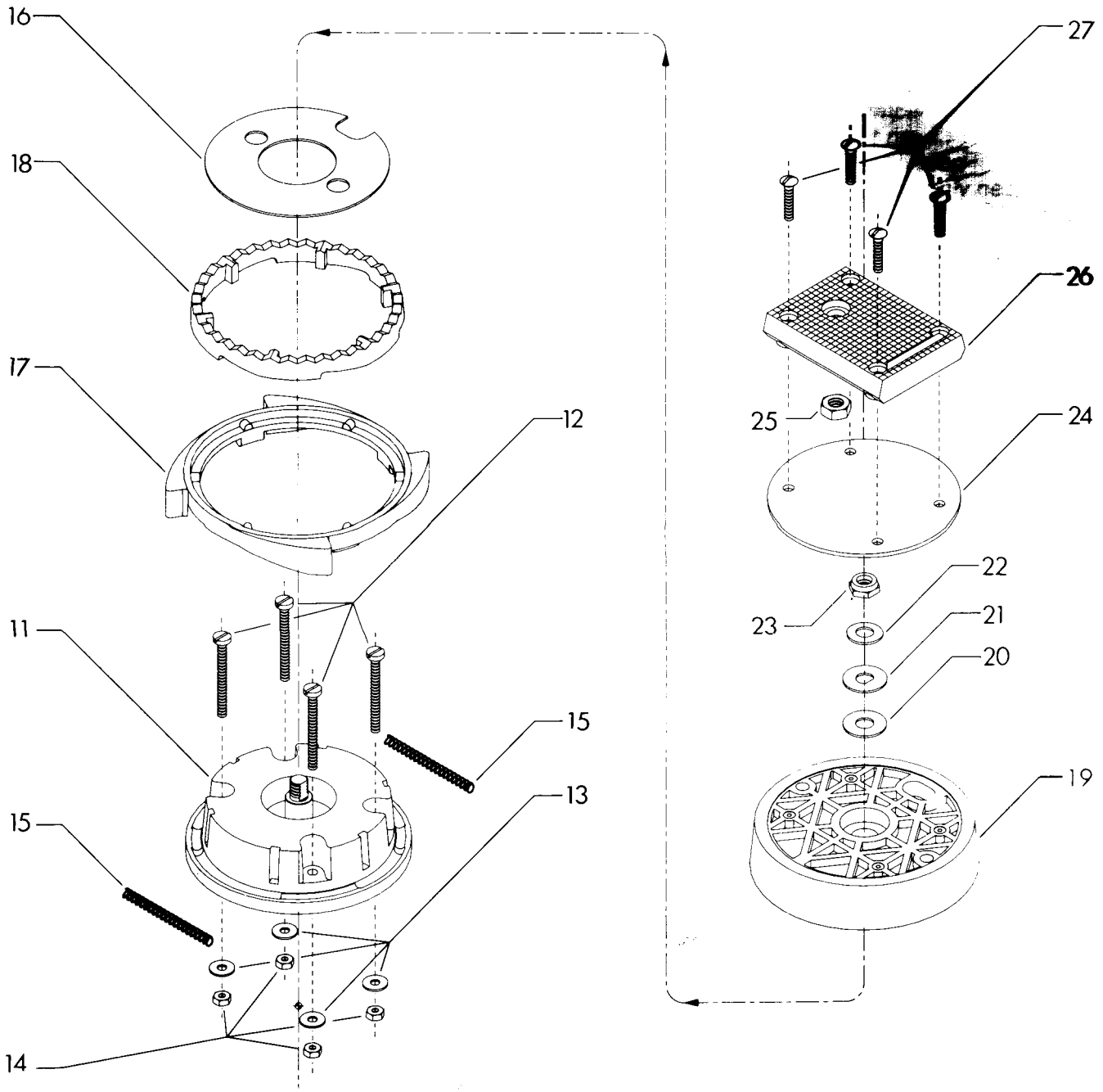
1. FRAME AND MOUNTING BASE
2. 622 SWIVEL-MATIC® BASE
3. DRAG BRAKE SYSTEM
4. CABLE FOOTAGE COUNTER
5. BOOM TIP ASSEMBLY
6. BOOM
7. ROD HOLDER OPTION

FRAME AND MOUNTING BASE



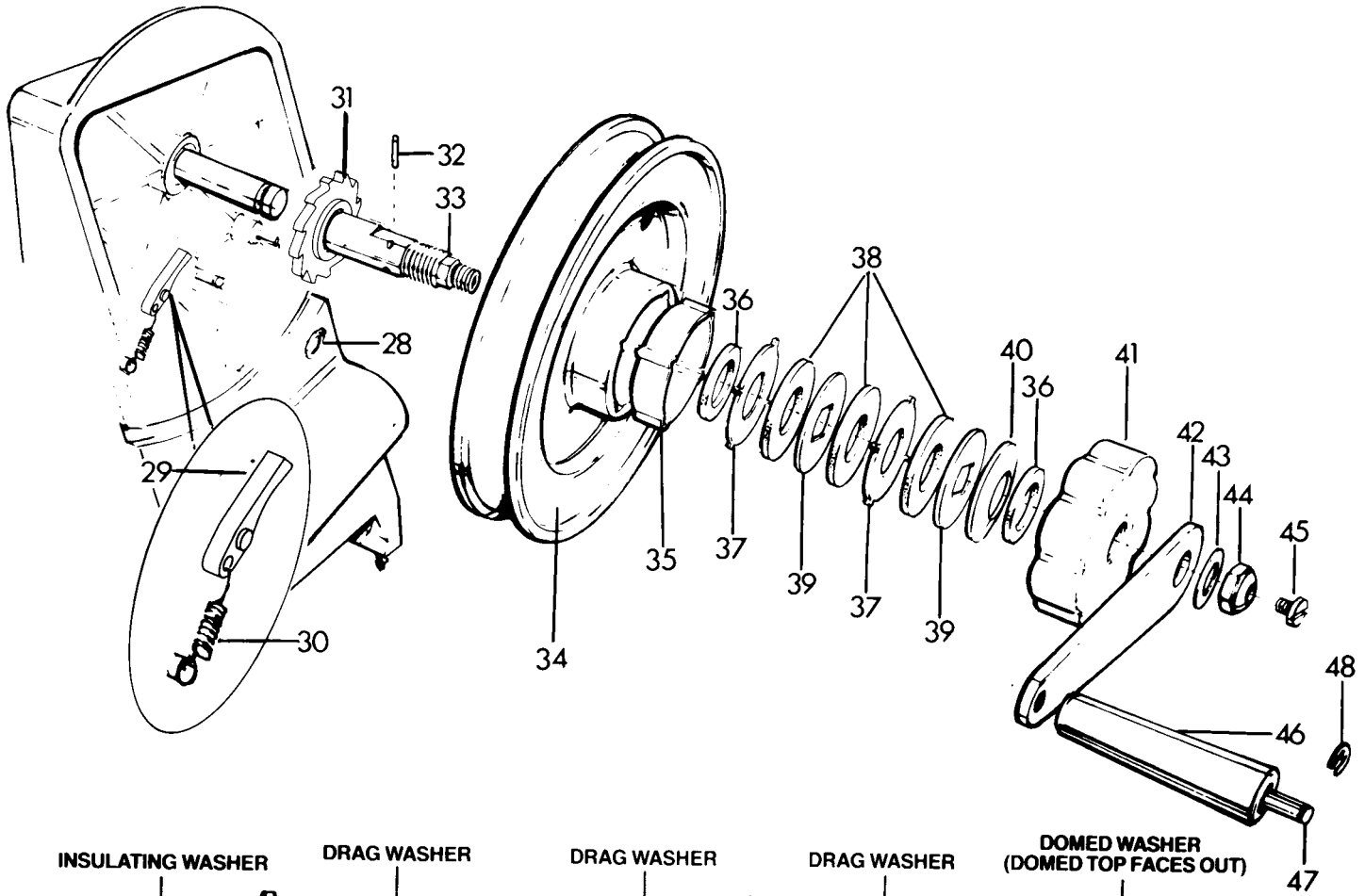
KEY NO.	DESCRIPTION	PART NO.
1	FRAME	132-600
2	HOLD DOWN KNOB	184-600
3	HOLD DOWN KNOB WASHER	206-600
4	HOLD DOWN KNOB SPRING	192-600
5	HOLD DOWN RETAINING RING	195-600
6	MOUNTING SCREW (4)	209-600
7	BASE PLATE	133-600
8	BASE PLATE NUT	193-600
9	SWIVEL BASE WASHER (4)	220-600
10	SWIVEL BASE NUT (4)	211-600

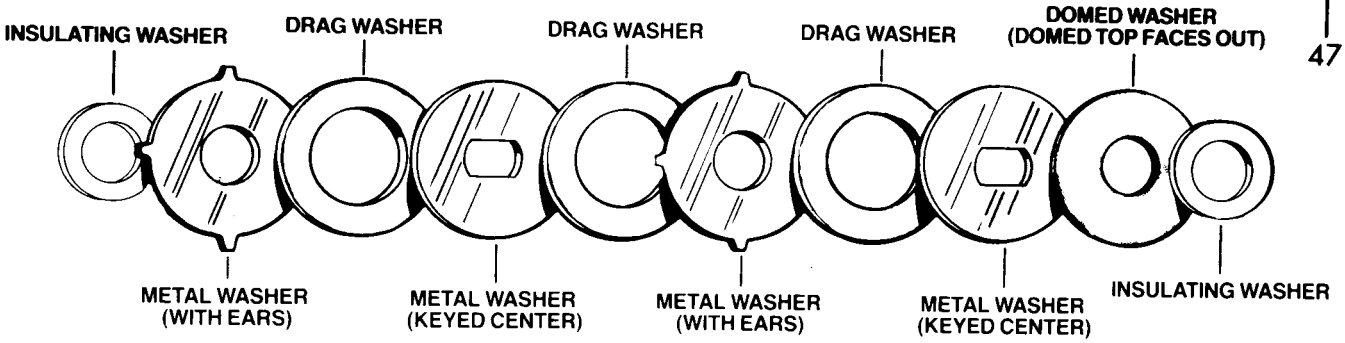
622 SWIVEL-MATIC BASE



KEY NO.	DESCRIPTION	PART NO.
11	SWIVEL BASE BOTTOM	238-622
12	SWIVEL BASE MOUNTING SCREW (4)	250-620
13	MOUNTING SCREW WASHER (4)	220-600
14	MOUNTING SCREW NUT (4)	211-600
15	RETURN SPRING (2)	14-622
16	SWIVEL BASE WASHER	240-622
17	ADJUSTING RING	238A-622
18	LOCKING RING	237A-622
19	SWIVEL BASE TOP	237-622
20	SWIVEL DRAG WASHER	249-620
21	METAL DRAG WASHER	241-620
22	TENSION WASHER	18-970
23	LOCK NUT	23-130
24	SWIVEL BASE COVER	239-620
25	BASE PLATE NUT	193-600
26	BASE PLATE	133-600
27	BASE PLATE MOUNTING SCREW (4)	209-620

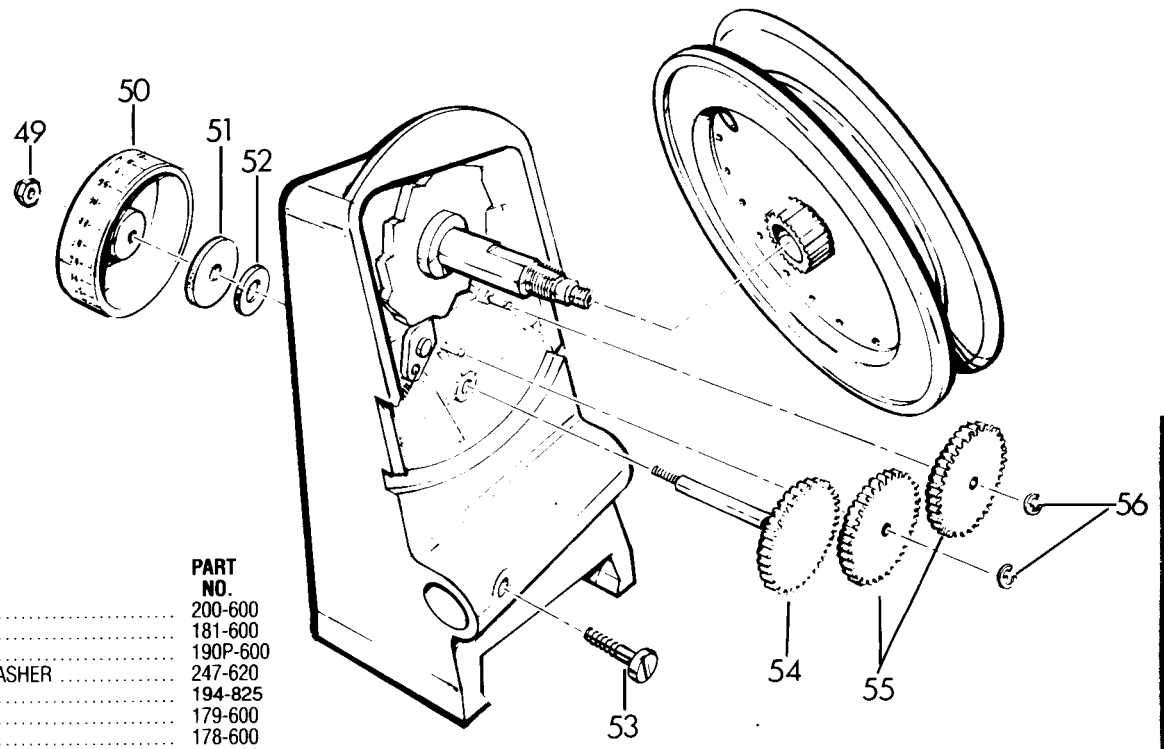
DRAG BRAKE SYSTEM





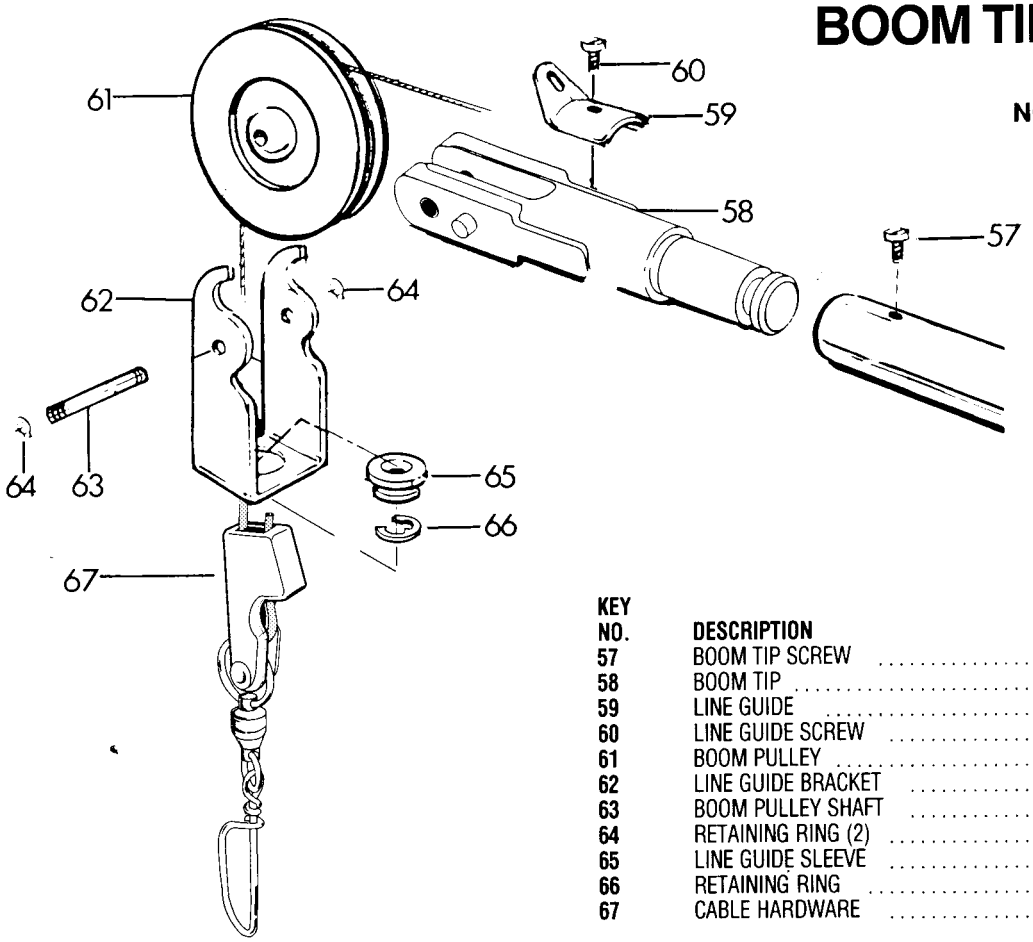
KEY NO.	DESCRIPTION	PART NO.
28	RETAINING RING	196-600
29	DOG RATCHET	15-625
30	DOG SPRING	14-600
31	RATCHET	81A-625
32	PIN-MAIN SLEEVE	102-600
33	MAIN SLEEVE	98A-600
34	SPOOL	29-800
35	THERMAL INSULATOR	191-836
36	INSULATING WASHER (2)	199P-600
37	EAR WASHER (2)	7-836
38	DRAG WASHER (3)	6P-600
39	KEY WASHER (2)	86-600
40	DOMED WASHER	8-600
41	DRAG CONTROL KNOB	10-600
42	HANDLE	24-600
43	HANDLE WASHER	198-600
44	HANDLE LOCK NUT	23-130
45	HANDLE SCREW	23-85
46	HANDLE KNOB	25-600
47	HANDLE KNOB SHAFT	91-600
48	C-RING	59-600

CABLE FOOTAGE COUNTER



KEY NO.	DESCRIPTION	PART NO.
49	COUNTER CUP LOCK NUT	200-600
50	COUNTER CUP	181-600
51	COUNTER CUP WASHER	190P-600
52	COUNTER CUP THRUST WASHER	247-620
53	BOOM SCREW	194-825
54	COUNTER CUP GEAR	179-600
55	IDLER GEAR (2)	178-600
56	IDLER GEAR RETAINING RING (2)	69B-600

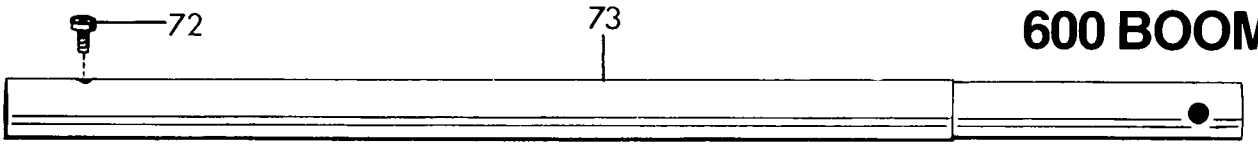
BOOM TIP ASSEMBLY



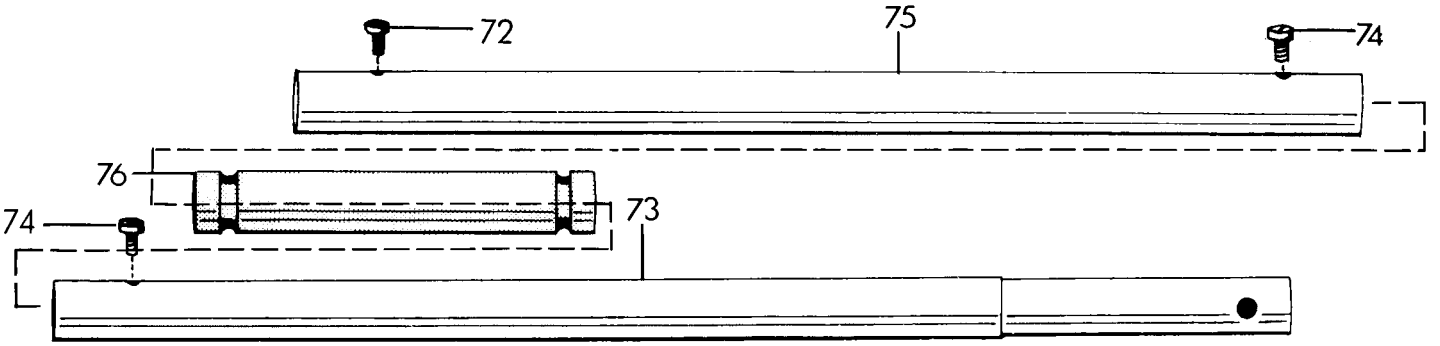
NOTE: Penn's new one piece boom tip allows easy insertion and removal of the boom tip, without removing the boom tip screw (key #57). Align slot in boom tip stud with boom tip screw, insert boom tip and rotate halfway (180°) to normal trolling position. This feature, along with the new thumb screw securing the boom to the unit, allow the boom assembly to be easily broken down for storage or transportation.

KEY NO.	DESCRIPTION	PART NO.
57	BOOM TIP SCREW	204P-600
58	BOOM TIP	218-800
59	LINE GUIDE	223-836
60	LINE GUIDE SCREW	204R-820
61	BOOM PULLEY	180-600
62	LINE GUIDE BRACKET	201-620
63	BOOM PULLEY SHAFT	182-820
64	RETAINING RING (2)	196-600
65	LINE GUIDE SLEEVE	202-600
66	RETAINING RING	203-600
67	CABLE HARDWARE	213-825

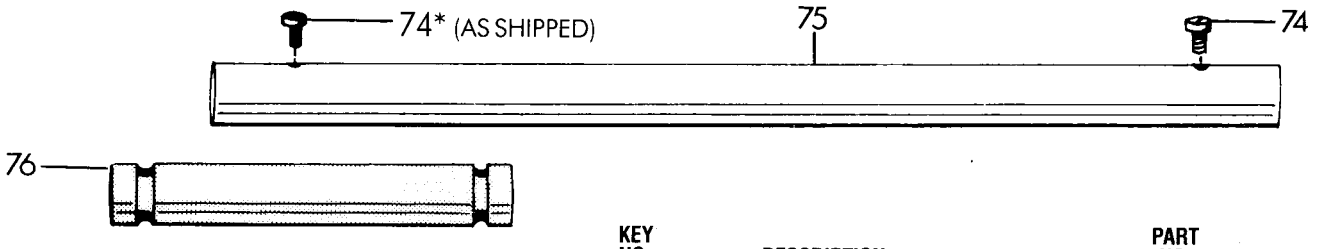
600 BOOM



625 BOOM



638 BOOM EXTENSION



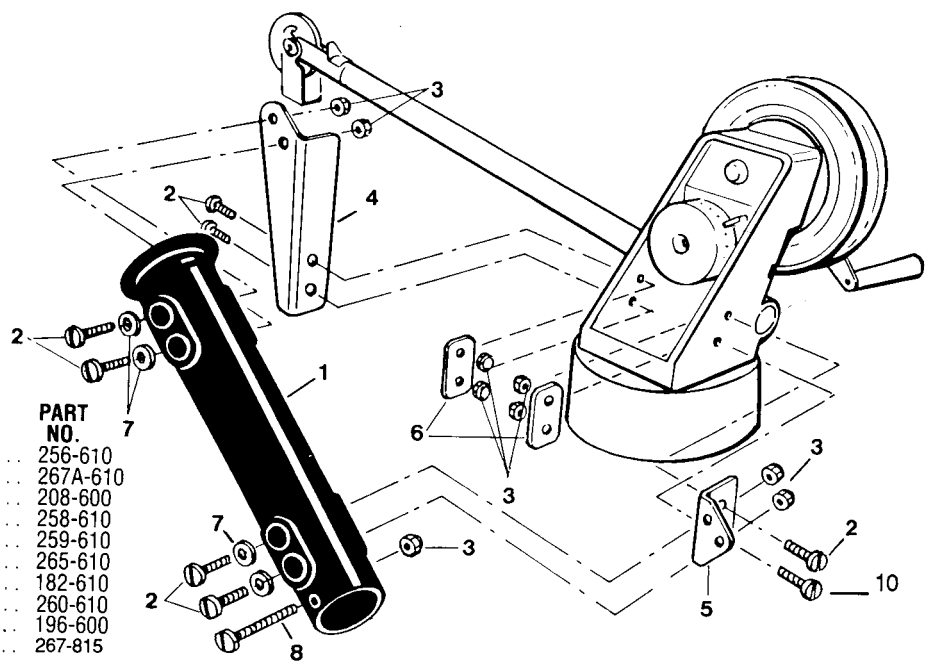
*USE KEY #74 AT THE END OF BOTTOM BOOM AND REPLACE WITH #72 WHICH CAME WITH ORIGINAL 2 FT BOOM.

KEY NO.	DESCRIPTION	PART NO.
72	BOOM TIP SCREW	204P-600
73	BOOM BOTTOM	183-800
74	BOOM EXTENSION SCREW (2)	204P-820
75	BOOM EXTENSION	183-820
76	BOOM STUD (CENTER)	219-820

Fathom-Master Accessories

For Downrigger Fishing

Fathom-Master Rod Holder 610RH
Rod holders for attaching to either 600 or 620 models are available as accessory.

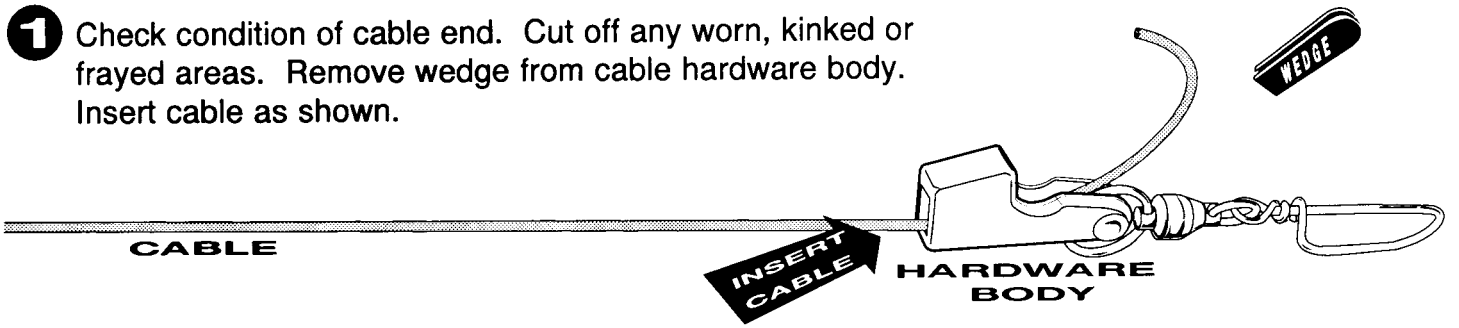


KEY NO.	REPLACEMENT PARTS	PART NO.
1	ROD HOLDER TUBE	256-610
2	MOUNTING BOLTS (7)	267A-610
3	SELF-LOCKING NUTS (8)	208-600
4	FORWARD BRACKET	258-610
5	REAR BRACKET	259-610
6	BACKING PLATES (2)	265-610
7	FLAT WASHERS (4)	182-610
8	GIMBAL BOLT	260-610
9	RETAINING RING (2)	196-600
10	LONG MOUNTING BOLT	267-815

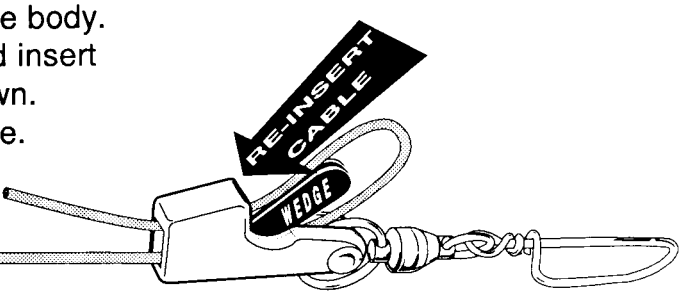
PENN REELS

Attaching Penn Tru-trac®
Cable Hardware

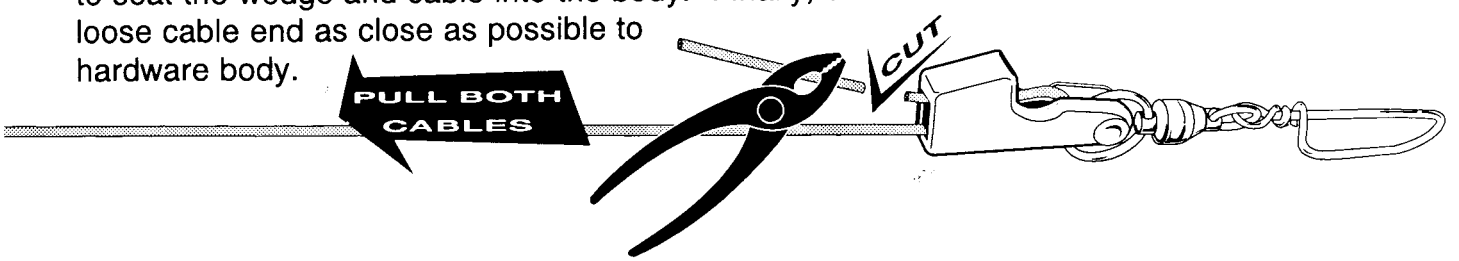
1 Check condition of cable end. Cut off any worn, kinked or frayed areas. Remove wedge from cable hardware body. Insert cable as shown.



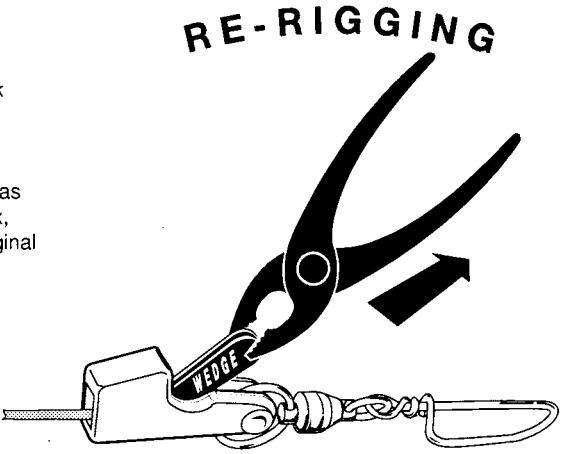
2 Insert wedge at an angle into the cable hardware body. Place cable around outside track on wedge, and insert loose cable end back out through body, as shown. Pull on both cable end and cable to insert wedge.



3 Hold both cable end and cable with a pair of regular pliers. Pull on both cables while holding the cable hardware body to seat the wedge and cable into the body. Finally, cut loose cable end as close as possible to hardware body.



Penn Tips For Better Deep Trolling



•Inspect cable often, especially near the cable hardware end, since this is where cable wears the fastest. **Immediately** replace any worn, kinked or frayed cable by cutting back and re-rigging your cable.

•To remove wedge for re-rigging your Penn Tru-Trac® cable hardware, pull hard on the bottom of the wedge with pliers, **as shown.** The pliers will chew the wedge up a bit, but as long as the track is not too chewed up, and the cable lays snug around the wedge's track, you can re-use the wedge. Six-packs of replacement wedges are available once the original wedge becomes too chewed up.

•Do not run cable over a hard surface with weight attached, or do not bend cable over on itself. Both will result in kinks, which weaken cable.

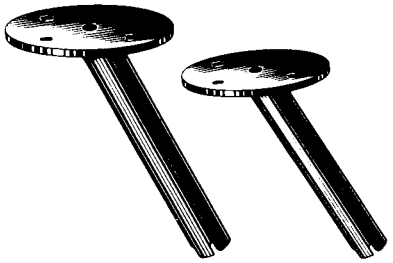
•If you're fishing close to bottom or in a snag-infested area, you could attach a weaker snap swivel to the 200 lb. test Sampo® ball bearing swivel already attached to your Penn Tru-Trac® cable hardware. Doing that, if your weight snags and you can't free it, the weaker snap swivel will break first. At least you will most likely save the cable hardware, fishing lure, etc. ***Good downrigger fishing!***

PENN® REELS

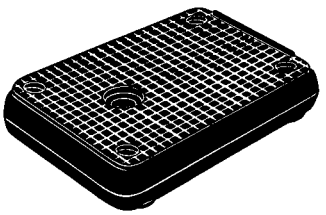
Fathom-Master® Accessories

For Downrigger Fishing

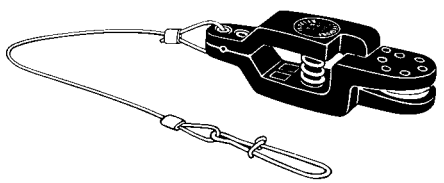
No one can match Penn's lineup of quality. American-made accessories for deepwater trolling in fresh or saltwater!



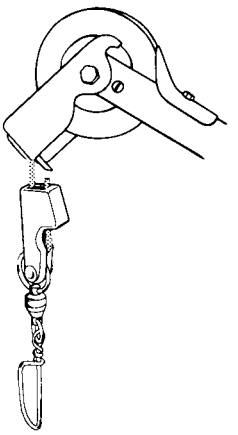
Quick Mount Adapters 632/634
Designed for instant mounting and removal of Penn Fathom-Master* downriggers in flush mount rod holders. Quick Mount Jr. (#632) for small rod holders, Quick Mount Sr. (#634) for large rod holders. Fits Fathom-Master* fixed base and Swivel-Matic* base. Heavy duty anodized aluminum construction.



Penn Fathom-Master* Fixed Base Plate 133C-600SP
Extra base plate for all Fathom-Master* models, increases Fathom-Master* versatility by allowing additional mounting locations. Includes mounting hardware.



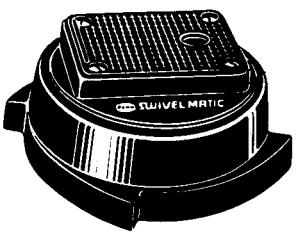
Penn's Offshore Release System Product #354-POR1
This versatile release system (which attaches to Penn's Fathom-Trol® down-rigger weight easily and simply) uses spring loaded rubber pads to gently but firmly hold line. It won't pinch your line, yet allows for a positive release once a fish strikes. With the Penn Offshore Release System, you can easily adjust to a wide range of deep trolling lures and baits. Offering the utmost in corrosion resistance, the system is equally at home in either salt or fresh water.



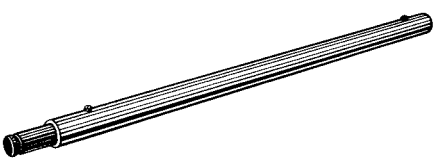
Penn Tru-Trac® Cable Hardware Product #213-825SP (Complete kit, including hardware body, 200 lb. test Sampo® ball bearing swivel, cable wedge)
Penn's recommendation for your most important connection in downrigger fishing. High strength polymer wedge secures cable into body of same material. Easy to install and re-rig. Requires no crimping tools or sleeves. Can be used over and over again.

Penn Tru-Trac® Replacement Wedges Product #290A-825SP (6 replacement wedges)
The original wedge supplied with Penn's Tru-Trac® Cable hardware will last for several re-riggings. A six-pack of replacement wedges will vastly increase the service life of your Penn Tru-Trac® cable hardware.

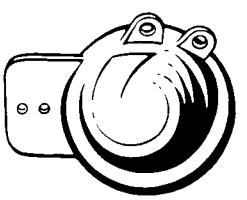
Penn Fathom-Master* Cable
Grade 316 heavy duty replacement stainless steel cable for use with Penn or other brand downriggers. 135 lb. test. Available in 3 lengths: 200 ft. (#212-600SP); 400 ft. (#212-624SP); 600 ft. (#212-626SP).



Adjustable Swivel-Matic* Base 622 ASM
Full 360° rotation with adjustable stops that let you turn and lock the Fathom-Master* into 36 different deep trolling and rigging positions. Can also be used with 800 or 600 Fathom-Master* models for easier access to weight/release. Can be transom or side mounted.



Fathom-Master* Boom Extension 638
Boom Extension plus insert converts a two-foot Penn Fathom-Master* downrigger boom to a four-foot boom.



Penn Fathom-Trol Weight 10W
Complete Fathom-Trol® downrigger weight. Rounded 10 lb. weight with flat bottom to resist rolling. Choice of two lugs for attaching downrigger cable. Also features pre-drilled holes on rear stabilizer for attachment of Penn's Offshore release (included with each weight). For fresh or salt water use.

LIMITED WARRANTY

Penn Limited Warranty. Penn Fishing Tackle Mfg. Co. warrants its Products to be free from defects in materials and workmanship for a period of one year from the date of purchase. This warranty does not cover damage or malfunctions caused by accident, abuse or normal expected wear. If your Penn Product has a defect within the terms of the warranty, you should return it to us at one of the Penn Warranty Centers indicated below. All shipping and insurance costs and transportation arrangements will be borne by you and are your responsibility. We will repair or replace the Product, at our option, without further cost to you, (including free return transportation and insurance). If, however, the repair is not covered by the provisions of this warranty, your Penn Product will be repaired and returned to you at a reasonable charge for labor, parts and return transportation and insurance.

ALL WARRANTIES WHICH MAY BE IMPLIED BY OPERATION OF LAW, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND WARRANTIES OF FITNESS FOR ANY PARTICULAR PURPOSE, SHALL BE LIMITED TO ONE YEAR FROM THE DATE OF PURCHASE. IN NO EVENT SHALL PENN FISHING TACKLE MFG. CO. BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS WARRANTY OR ANY OTHER WARRANTY WHICH MAY BE IMPLIED BY LAW.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, AND SOME STATES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION AND/OR EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

PENN SERVICE & PARTS PROCEDURE

Penn Service. Unlike many import companies, Penn prides itself in providing fast and excellent service at reasonable prices. This is possible because most Penn Products are made in the U.S.A. and Penn maintains a policy of designing models to maximize Product and part continuity. Penn does not change Products solely for the sake of change, but only when the change results in an improved Product.

Many Penn Products have been in service for 40 years or more. Our customers marvel at their ability to easily obtain replacement parts to keep those models in service.

For the fastest repair service and spare parts, we suggest you contact your local Penn dealer. You may also return your Penn Product for factory service to the address below. Send it insured and include a short note describing the service you want. To avoid errors, make sure that your name and return address appear neatly and clearly on both your outside package and your note. Allow sufficient and reasonable time for Penn to receive and service your Product. Avoid our spring rush by sending your Penn Products in for service and repair during our fall or early winter.

Penn will notify you that your Product has been serviced, providing a reasonable charge for parts, labor and return postage, or you can request VISA or MasterCard payment. Provide card type, name on card, card number, expiration date and daytime telephone number when paying by credit card.

PENN WARRANTY CENTERS

Penn Fishing Tackle Mfg. Co.
Factory Service Department
3028 West Hunting Park Avenue
Philadelphia, PA 19132-1121
(215) 229-9415

Penn Fishing Tackle Mfg. Co.
California Warehouse
354 West Alondra Boulevard
Gardena, CA 90248-2423
(310) 327-2531

There are over two dozen Penn Warranty Centers across the United States and Canada alone. Please contact either address above for the Penn Warranty or Service Center closest to you.

Penn Fishing Tackle Mfg. Co. reserves the right to discontinue models and make changes in design specifications without notice. Penn's policy of ongoing research may necessitate design changes for Product performance improvement.

Made in the U.S.A.

4/97