

“TUFFY” Products

TUFFY Ball Detector

Part # TBD-Assy

For 30's & 70's

Are you tired of light bowling balls not cycling the machines? Does your automatic scoring give you problems because the machine does not cycle? We encourage you to try the TUFFY Ball Detector, which will cycle your machine every time!

- **Over 2000 units sold in the last 1 ½ years**
- **Works on AMF and Brunswick**
- **Easy installation and adjustment**
- **Priced well below anything on the market**
- **Cycles machine every time**
- **Great for Bumper bowling**
- **Does away with scoring problems caused by no cycle**

TUFFY Slow Sheave

Part # 030-008-689-T (30's)

Part # 000-022-063-T (70's)

Problem:

Light bowling balls are constantly being pushed out of ball exit; slowing the return of the ball to the bowler and delaying the game. Kicker rollers are prematurely being worn because fast paddle is pushing against ball while kicker rollers are trying to push it in. This creates heat, which causes premature break down of the kicker roller.

Remedy:

TUFFY Slow Sheave slows down the time it takes paddle to go from one side to the other. Because of this slower action when the paddle hits the light balls there is not the excessive speed to force the ball back onto the carpet. Now, because the paddle is slower there is more time for ball to enter the exit without having paddle hold it up. This also saves wear and tear on the kicker roller.

- **Slows paddle down and makes it easier for the ball to get under lift**
- **Allows plenty of time for light balls to get into the exit without being pushed out**
- **Try one, you will really like it!**

TUFFY Ball Lift Pressure Kit

Part # 612-070-013-T

For 30's & 70's

Problem:

Excessive oil makes the ball slip as it is pulled up the lift. This can also be caused by a hard ball lift belt or bad covers on the lift rods.

Remedy:

TUFFY Ball Lift Pressure Kit makes it easier for ball to go up the lift, because it puts more down pressure on the ball lift, which is controlled by an unusual method of adjustable spring tension.

- **More lift pressure**
- **Easier for ball to go up lift**
- **Easy installation**
- **Easy method for controlling spring tension**

TUFFY Roller Shaft

Part # 000-022-077-T

For 30's & 70's

Problem:

In a hurry and can't get a bad kicker roller off of the shaft because the shaft is too close to the side of the machines?

Remedy:

TUFFY Roller Shaft makes the removal quick and easy.

- **The shaft has been shortened to make removal of the kicker roller easier**
- **Saves time and effort**

TUFFY Rudder Drive Shock

Part # 000-029-671-T

Problem:

Have you noticed that even when you receive a new rudder drive shock that many times they already drive too hard or too soft?

Remedy:

TUFFY Rudder Drive Shock has eliminated this problem. This is a lifetime shock needing only an occasional spring replacement.

- **This shock is designed to give equal pressure in both directions**
- **A non-hydraulic rudder drive shock**
- **Replaceable end fittings**
- **Excellent when used in conjunction with the TUFFY Slow Sheave 000-022-063-T**

TUFFY Exit Paddle
Part # 070-007-275-T

Problem:

Most of the current ball exit paddles do not push the pin far enough out of the ball door and as a result, you have a ball call because of a pin in the door.

Remedy:

The TUFFY Exit Paddle has been designed to eliminate this problem.

- Made of durable urethane
- Pushes the pin onto the carpet so that it is carried back to the pin wheel
- Will eliminate a lot of the calls

TUFFY $\frac{3}{4}$ Round Kicker Roller
Part # 000-022-080-TS

Problem:

Because of excessive oil, all kicker rollers are having a tough time getting the ball into the ball exit.

Remedy:

TUFFY $\frac{3}{4}$ Round Kicker Roller, *our most popular* kicker roller. We designed this one! Others have copied its shape, but not its effectiveness.

- Designed with one flat side, to start the ball in
- By having only one flat side; it allows the $\frac{3}{4}$ round side more time to push the ball under the lift
- We can also supply you with any kicker roller from *Vantage, Quality and Murrey*

TUFFY Spring Tool
Part # 000-024-603-T
For 30's & 70's

Problem:

Ever notice how hard it is to put a ball lift belt back on once it has been removed?

Remedy:

Try our TUFFY Spring Tool, which makes it so easy to remove and replace a belt.

- Makes removing and replacing belt, **QUICK & EASY**
- Well worth the price of the tool

TUFFY Belt – Spliced
Part # 000-022-099-T (70's)
Part # 030-008-671-T (30's)

Problem:

When you break a carpet drive belt it causes a bowling delay, as you have to unbolt the lower lift to get the new belt on.

Remedy:

The TUFFY Belt – Spliced is designed to have you back bowling in minutes.

- No removal of bal lift needed to get back on
- Quick & Easy
- Simply route belt and clip together

TUFFY Hole Closer
Part # THC

Problem:

When you break out a hole in one of your bin stringers.

Remedy:

The TUFFY Hole Closer Kit will prevent you from having to buy a new stringer, by closing the holes with specially made hole closer washers.

- Kit includes 2 specially made spacer washers
- Easy installation
- Will save you money by eliminating having to purchase a new stringer

TUFFY Rectifier
Part # 000-025-868-T (30's)

Problem:

Power rectifier, which supplies 24V DC not putting out 24V DC causing stepper not to pulse smooth and relays not to pull in properly.

Remedy:

Replace bad rectifier with a solid state TUFFY Rectifier which will give you a more positive 24V DC.

- Solid State
- Maintains a more positive 24V DC

TUFFY Circuit Breaker
Part # 030-005-866-T (30's)

Here is a circuit breaker that you *do not* have to pay an arm and leg for.

- Substantial savings over manufacturer type
- Same installation as original
- Same operation as manufacturers type, except that it costs much less

TUFFY CR2-3 Relay
Part # 070-011-755
For 30's & 70's

Problem:

Old style Allen Bradley relays. Allen Bradley no longer makes contacts for the relay. After market contacts have proven to be unreliable.

Remedy:

Replace your old style contactor with the self contained TUFFY CR2-3 Relay, which eliminates having to replace contacts. Pushing a button on top of the relay can run sweep and motors.

- No contacts to replace
- Economical
- Motor can be run directly from button on top of contactor. This is helpful for getting a machine out of interlock.
- Easy wiring installation

TUFFY Contact Saver
Part # 788-001-057-TCS
For 30's & 70's

For use on all 30's and 70's chassis with Allen Bradley relays. Tired of burning out expensive upper table and sweep contacts? Try our amazing TUFFY Contact Savers.

- When added to a set of worn, but usable contacts, the contact will last forever
- Contact saver can be used on all AMF chassis with Allen Bradley contacts
- Easy to install; three (3) wires and there are *NO* adjustments

TUFFY Polyester 6 Hole Facing

Part # 070-006-761-P6

For 30's & 70's

This facing is probably the most accepted facing on the market.

- **Reversible**
- **Tremendous wear resistance**
- **Held onto plant by only six (6) urethane rivets**
- **No obstructions on lower half for ball to hang on to**
- **Non-marking**
- **Long lasting**

TUFFY Curtain Rod Bushing

Part # 070-011-286-T

When you fail to replace the rubber bushing that holds the curtain rod, you know what happens. The hole becomes elongated and the curtain rod becomes worn through. The TUFFY Curtain Rod Bushing eliminates this problem.

- **Made of durable urethane**
- **Prevents curtain rod from wearing into the machines metal kickback plate**

TUFFY Curtain Rod Hanger

Part # 070-005-610-T

If you break it, *WE WILL REPLACE IT.* Just send back your broken hanger and we will send you a new one.

- **Made of durable urethane**
- **Holes reinforced with a steel washer**
- **Long lasting**

TUFFY Velcro Cover

Part # 070-011-840-T

For 30's & 70's

Eliminates rivets and the balls from sticking to the facing or the rivets.

TUFFY Tube

Part # 070-006-004-T

You know what happens when you get bent distributor tube? Makes it almost impossible to parallel. It also creates pin jams at the 7 and 10 pin corners. Try our beefed up TUFFY Tube.

- **Made of heavier gauge tubing, which makes it more resistant to bending**
- **Less likely to bend when someone pushes down on the end of the distributor**

TUFFY Trip Rod Assembly

Part # 070-006-668-T

Did you know that the trip arm, which has the roll pin connecting the casting to the rod, causes many distributor jams? When the roll pin hole becomes sloppy, jams occur. We have eliminated this problem with a replacement that is long overdue.

- **The index rod and the casting are held together with a bolt**
- ***NO* roll pin to break or wear out**
- **Makes for more positive indexing**

TUFFY U Joint – Short Shaft

Part # 070-007-586-TS

Our best selling universal joint. Made in Europe.

TUFFY U Joint – Big Bertha

Part # 070-007-586-T

For 30's & 70's

We call this one Big Bertha, because it is so hefty. It also has a grease zerk installed and comes with a left or right shaft of your choice.

- **Will outlast any U-Joint now on the market**
- **The only U-Joint with a grease zerk**
- **Special pin makes installation easy**
- **Comes with new distributor drive shaft**

TUFFY Distributor Gripper Belt

Part # 070-006-757-TG

- **Pins will not slip on this belt**
- **Belt design grabs pins off of orientation pan quickly**

TUFFY Power Plug Kit

Part # 000-024-719-K

For 30's & 70's

Here is a new type of power plug, which replaces the original.

- **Replaces existing Russell Stol power plug assembly**
- **Includes both receptacle and plug**
- **Very economical**
- **Twist lock connection**

TUFFY Foul Conversion

Part # 120-001-000-TFC

For 30's & 70's

Changes over your 120's with lamps and photocells to an infrared operation.

- **Inexpensive update for existing unit**
- **Visible red led operation**
- **Easy to adjust, and stay in adjustment**
- **No bulbs to replace or get out of focus**
- **No photocells to go bad**
- **Solid state circuitry**

TUFFY PC Board SS Foul Unit

Part # 120-001-081

For 30's & 70's

The problems with the current OEM PC boards are the relays. Another big problem is the solder joints that hold the relay, loosen up causing various malfunctions. The TUFFY board has eliminated this problem.

- **New designed PC board**
- **No relays to loosen up or malfunction**
- **Smaller more condensed board**
- **Less expensive than OEM style**

TUFFY Foul Conversion

Part # 008-100-000-TFC

For 30's & 70's

Changes over your outdated 82-8 foul unit to infrared operation.

The TUFFY conversion is an inexpensive update that uses your existing control box. Uses virtually maintenance free solid-state circuitry with no bulbs or photocells to replace. This unit is easy to install.

Changes from:

Antiquated OEM technology

Obsolete timer motors

Undependable switches

Unreliable 1154 lamps

To:

Modern infrared operation

Reflector in place of photocell

Easy Focus; indicator LED comes on in focus

Easy to replace PC board

TUFFY Urethane Cover

Part # 008-100-002-T

For 30's & 70's

Replace your old beat up cover with this TUFFY urethane cover.

TUFFY Flat Gutter (pair)

Part # TFG
For 30's & 70's

Tired of broken and cracked wooden flat gutters? Try our TUFFY one piece flat gutter. Priced well below anything else on the market.

- **ABC approved**
- **Easier to install the two (2) part wood gutters**
- **Can withstand more abuse than wood**
- **Rejuvenate scoring**
- **Requires less maintenance**

TUFFY Gas Spring Assembly

Part # 070-011-729-T
For 30's & 70's

Here is a replacement for the Mod V Mask shock that is more reasonable in price and is built stronger to last longer.

- **End fittings lock into shock more permanent than manufacturers type**
- **Replaces existing Mod V Mask shock**
- **Much more reasonable in price**
- **Built stronger, to last longer**

TUFFY Stabilizer Kit

Part # TSK

When you walk across the top of the machines, do they move back and forth? If they do, order our TUFFY Stabilizer Kit and eliminate this problem.

- **Will eliminate machine movement**
- **Easy installation**
- **Made of high grade metal**
- **All mounting hardware provided**

TUFFY Motor Start Relay

Part # 785-000-000-T (70's)
Part # 785-000-000-T3 (30's)

Replaces switch and mechanism in any motor. It is *NOT* solid state, so it does not create coasting. Does not connect in motor and can be replaced in less than one (1) minute.

- **Works on all makes of combo motors; National, General Electric and Westinghouse**
- **Eliminates mechanical switch and mechanism in existing motor**
- **Does not create coasting as in most solid devices**
- **70's relay mounts in front channel next to capacitors for easy accessibility**
- **Replacement time; one (1) minute, easy installation**
- **Proven reliability, in service usage since 1977**

TUFFY Motor Tester
Part # 785-000-070-TMT (70's)

How many times have you had a combination motor problem and did not know whether the problem was being caused by the motor or machine? Save a lot of time by using the TUFFY Motor Tester.

- Will show if problem is in the motor or the machine
- Easy hook up
- Save time trouble shooting

TUFFY National Combo Shaft
Part # 785-502-008-T (70's)

Replace your bent shafts and your shafts with worn keyways with a TUFFY Shaft.

TUFFY Field Puller
Part # 730-000-000-TFP

Do you know how hard it is to pull the field off of a National gearbox without bending the rotor shaft? *VERY!* Our puller makes life easier.

TUFFY National Gearbox Gears

Since everyone else in the bowling industry has stopped supplying gears for the National gearboxes, Stahl's Seventy's has taken the responsibility for producing these gears.

- Gear for Combo and Backend
- Priced to save you money
- Gears available

TUFFY National BE Field Exchange
Part # 730-000-000-NBE (70's)

As you are aware, the National Backend motors will only run in one direction. When you receive a backend field exchange from Stahl's Seventy's the field will be rebuilt and modified to run on either a left-hand (LH) or a right hand (RH) machine. Now you only need to keep one (1) spare on hand.

- Stops your dependence on having two (2) spare fields
- Motor can be used on LH or RH machines
- Troublesome switch and mechanism have been eliminated
- Switch and mechanism replace a reliable solid state switch
- Motor carries a six (6) month warranty

TUFFY Air Exit

Part # TAE
For 30's & 70's

It is real sad, but if it wasn't for the ball manufacturers making bowling balls to grab the oil better and oil manufacturers making oil to keep up with bowling balls, we wouldn't need this TUFFY product. However, until they get their act together, you will still need this.

If you ever wanted to streamline your ball exit system, reduce maintenance costs, and gain more control over rudder travel speed, timing and duration, then this is the system for you. Probably the fastest exit system made.

- **Eliminates kicker rollers**
- **Eliminates all kicker belts**
- **Eliminates drive shock**
- **Eliminates tension assembly (mouse trap)**
- **Runs off of a small compressor. One per pair**
- **Virtually impossible for pins to get stuck in ball door**
- **Fastest ball return on the market**
- **Call for a FREE video**

TUFFY Complete Cover – Thick

Part # 000-024-663-4TT
For 30's & 70's

Are the bowling balls starting up your PBL lift and then slipping back down? You need the TUFFY lift covers that are soft and twice the thickness of regular covers.

TUFFY PBL Paddle

Part # 070-011-146
For 30's & 70's

The TUFFY PBL Paddle has been designed to completely push the pin out of the ball exit.

- **Made of durable urethane**
- **Pushes the pin onto the carpet so that the carpet can carry it back to the pin wheel**
- **Will eliminate many ball calls**

TUFFY Counter Bracket

Part # 030-001-536-T

Replacement bracket for original counter bracket. This bracket is designed so the pin counter counts pins 2" quicker. Virtually eliminates 20 pin call caused by bad orientation. Should be used in conjunction with 030-004-766-T, TUFFY Arm.

TUFFY Arm
Part # 030-004-766-T

Replaces old style paddle with a more reliable new style.

TUFFY PW Clutch 95V
Part # TCA (30's)

Another exciting TUFFY product that will make you want to keep your 82-30 pinspotters. This idea was so good that AMF told us that they were going to copy it, and they did.

- **For use on 82-30 5850 and 6525 Pinspotters**
- **Reduces machine noise factor up to 90%**
- **Pin wheel feeds 10 pins to distributor and then stops until you need pin feed again**
- **Because pin wheel only turns when you need pin feed, you save on wear and tear of pin clamping assemblies**
- **Easy installation**
- **Can be used in conjunction with TUFFY kidney, which eliminates all toggle assemblies and pin feed solenoid.**

TUFFY Pulley 5" Cast
Part # 000-023-673-S5C (70's)

Problem:

Have you ever noticed that many times the pin is at the end of the distributor, before the distributor gets to the 4 bin? This causes the distributor to sway and causes pin jams.

Remedy:

Our TUFFY sheave.

TUFFY Kidney Assembly
Part # 610-309-002-TKA (LH)
Part # 610-309-003-TKA (RH)

The most exciting improvement to the 30's since it was designed. It has been such an improvement that it has been copied by one of our competitors.

- **Must be used in conjunction with TCA**
- **Eliminates the pin toggle assemblies**
- **Eliminates the pin feed solenoid**
- **Eliminates the pin seating roller**
- **Kidney holds pins in place, like on 82-70**
- **Toggle assemblies can be removed from the machine**

TUFFY Roller Top
Part # 000-021-211-T (70's)
Part # 030-006-663-TM (30's)

Having problems with your pinwheel bearings going bad and causing hoop to flake metal on the floor? Try our TUFFY bearing.

- **Made out of non wearing material**
- **Has replaceable bearings**
- **Will not cause hoop to wear if bearing goes bad**
- **Quiet.**

TUFFY Rear Roller Assembly
Part # 070-002-034-T
For 30's & 70's

Broken or worn out shaft on your rear carpet roller? No need to replace the entire roller. When you use the TUFFY Rear Roller you only need to replace the bad shaft end.

- **Replaceable ends**
- **Carpet pulley shaft is designed so bearing slides on easily**
- **Part number for replaceable ends:**
 - 070-002-034-SL Long Shaft**
 - 070-002-034-SS Short Shaft**
 - 070-002-034-SL3 Short Shaft - 30's**
 - 070-002-034-E End Plug**

TUFFY Bracket Remover
Part # TBR
For 30's or 70's

When your front roller bearing support brackets freeze to the pivot pin, it can be almost impossible to remove them. Now by using the TUFFY Bracket Remover, it can be off in seconds.

- **For use when front roller bearing support bracket freezes to the pivot stud**
- **Made of heavy gauge metal**
- **Makes removal simple and fast**

TUFFY Bushing
Part # 900-112-203-TBR
For 30's & 70's

Tired of the front roller bracket bushing freezing up? Try our bushing replacement kit which requires no lubrication.

- **Eliminates front roller bracket from freezing up**
- **TUFFY bushing needs no lubrication**

TUFFY Vibration Dampener

Part # 000-021-224-T

For 30's & 70's

Are you tired of changing vibration dampeners every summer? Try the TUFFY dampener and you will probably never have to replace it again.

- **Designed to outlast original manufacturer**
- **This vibration dampener utilizes three (3) flat steel plates and sandwiches a large mass of urethane between which compresses when impact occurs, rather than flexes as do the OEM design**

TUFFY Spring Tool

Part # 000-021-204-T

For 30's & 70's

This tool makes it easy to remove and replace the front roller flange spring.

TUFFY Carpet

Part # 000-026-753-T

For 30's & 70's

This TUFFY carpet is one of our best selling carpets.

- **As good as the best, but at a more reasonable price**
- **Has a nylon impregnated surface**
- **Does not stretch lengthwise or sideways**

TUFFY Ugly White Carpet

Part # 000-026-753-TW

For 30's & 70's

There are carpets and then there are very good carpets. The TUFFY Ugly White is a very good carpet and has a two (2) year warranty, and you can expect it to last 8 to 12 years.

- **Some belts already into their 14th year**
- **Costs a little extra, but it gives you a lot in return**

TUFFY Kickback Panel (BD)

Part # 000-029-640-T

For 30's & 70's

A great replacement for the original. Made of a tough lexan material. Long lasting.

TUFFY Kickback Panel

Part # 049-001-721-T

For 30's & 70's

Made of long lasting lexan material. Excellent pin action. ABC approved.

TUFFY T-Bar New Style

Part # 000-029-898-T

This new style T-bar replaces the original, which could flex and cause bounce board problems. Plenty of room to get socket on nuts to tighten down.

TUFFY Yoke Assembly

Part # 070-002-629-T

This part is for machines with AMF scoring. Eliminates need for table cable and ground wires to respot cells.

TUFFY Lamp Holder

Part # 148-006-815-T

Did you know that the majority of DWZ Quartz lamp failures are caused by the manufacturers style of lamp holders? The next time you have a lamp failure, look at the end of the burned out lamp. If one or both ends are burned, this indicates that the lamp is not being held firm enough. This will cause premature lamp and lamp holder failure. To correct this problem we have developed the TUFFY Lamp Holder.

- **Larger spring tension contacts**
- **Solid connections**
- **Better air circulation**
- **Amazingly simple installation**
- **No adjustments necessary**
- **One (1) year Warranty**

TUFFY Pin Holder

Part # 070-006-265-T

This pin holder makes all other pin holders obsolete.

- **All metal pin holder**
- **Will *not* mark pins**
- **Smooth surface assures easy shuttling of pins**
- **Will last forever**

TUFFY Bin Strap
Part # 070-006-268-T

Tired of breaking the shuttle straps on your shuttle? Replace them with the TUFFY Bin Strap, which are guaranteed forever.

- **Made of high grade metal**
- **Costs more, but will save you in the long run**
- **Guaranteed to last forever**

TUFFY Circuit Breaker
Part # 190-001-557-TCB

Replace your outdated fuse and fuse holder with the TUFFY Circuit Breaker.

TUFFY Sweep Repair Kit
Part # TLK-Assy

How many times have you broke a sweep link and because it had a lot of downtime? With the TUFFY Sweep Repair Kit your machine will be back up and running in minutes.

- **Will repair both 070-003-242 and 070-003-238 Sweep Links**
- **Made of long lasting steel**
- **Installs in minutes**
- **Will save you a lot of down time**

TUFFY Sweep Bumper
Part # 000-023-216-T (70's)

TUFFY Tip: Sticky bumpers can cause sweep links to break. If your sweeps are set correctly and they still jerk when they start thru, you need a TUFFY Sweep Bumper.

- **Not effected by oil**
- **Smoother operation of sweep run**

TUFFY Sweep Tube
Part # 030-007-020-T (30's)

Here is a tube you will not bend or break.

TUFFY Sweep Tube
Part # 070-003-180-T (70's)

Replaces original tube with one that will not bend or break.

TUFFY Sweep Mounting Bracket

Part # 300-000-170-T (RH)

Part # 300-000-171-T (LH)

For 70's

Replaces manufacturers type that is made of a lighter metal. Our's is made of a heavy gauge steel which will handle the maximum impact of a ball.

TUFFY Sweep Bumper

Part # 000-023-216-T (70's)

Made of a durable urethane. Will not become sticky or gummy and cause the sweep to jerk when starting.

- **Should last forever**

TUFFY Sweep Assembly – AMF Style

Part # 300-000-182

For 30's & 70's

This sweep is made to last forever.

- **Made of solid fiberglass**
- **Comes with all installation hardware**
- **Available in standard black color**
- **Will easily stand up to ball impact**
- **Will not ride over pins in gutter as easily, because of extra weight**

TUFFY K & L Conversion

Part # TKL (30's)

Designed for those mechanics that are tired of problems caused by bad table wiring. Do you have mechanics, which have occasional continuous sweep, no strike, and false strikes and out of times caused by the table? If so, you need to try the TUFFY K & L Conversion.

TUFFY TA1-2 Switch

Part # 000-026-042-T (30's)

Are you tired of trying to synchronize the table TA1 & TA2 switch's on your 82-30 machines? Now, with the TUFFY switch you should never have to synchronize again. One switch takes the place of two switches and there is only one adjustment to be made.

TUFFY Table Cable
Part # 070-005-604-T (70's)

Replace your worn table cable with this unusual TUFFY cable.

- Super flexible – 266 wire strands in each conductor
- Almost impossible for a wire to break in a TUFFY cable
- Wires are covered with a nylon mesh

TUFFY Pin Wheel Guard Holders
Part # 000-022-219-T

Problem:

Pinwheel guard falls into the machine and causes pin wheel to jam. Also a good chance for your carpet to get cut.

Remedy:

Replace guard using the TUFFY Pin Wheel Guard Holders.

Tuffy Plows & Plow Covers

- UHMW cover to protect plow from damage
- Twice the sound dampening
- Easy to install of existing plows

Tuffy Super Gripper Belt
Part #070-006-757-TSG

- Oil Resistant
- Flat profile makes it the easiest belt to clean in the bowling industry (clean with just a dry cloth) – No Chemicals
- Tackiest belt made
- Longest lasting belt (does not get hard or slick)
- Many happy customers (see testimonials)

Tuffy Crank Plate
Part# 070-011-226-T

- Does not bend at the post
- Welded nut plate makes for an easy installation

CatalogTuffyProducts 10/28/04