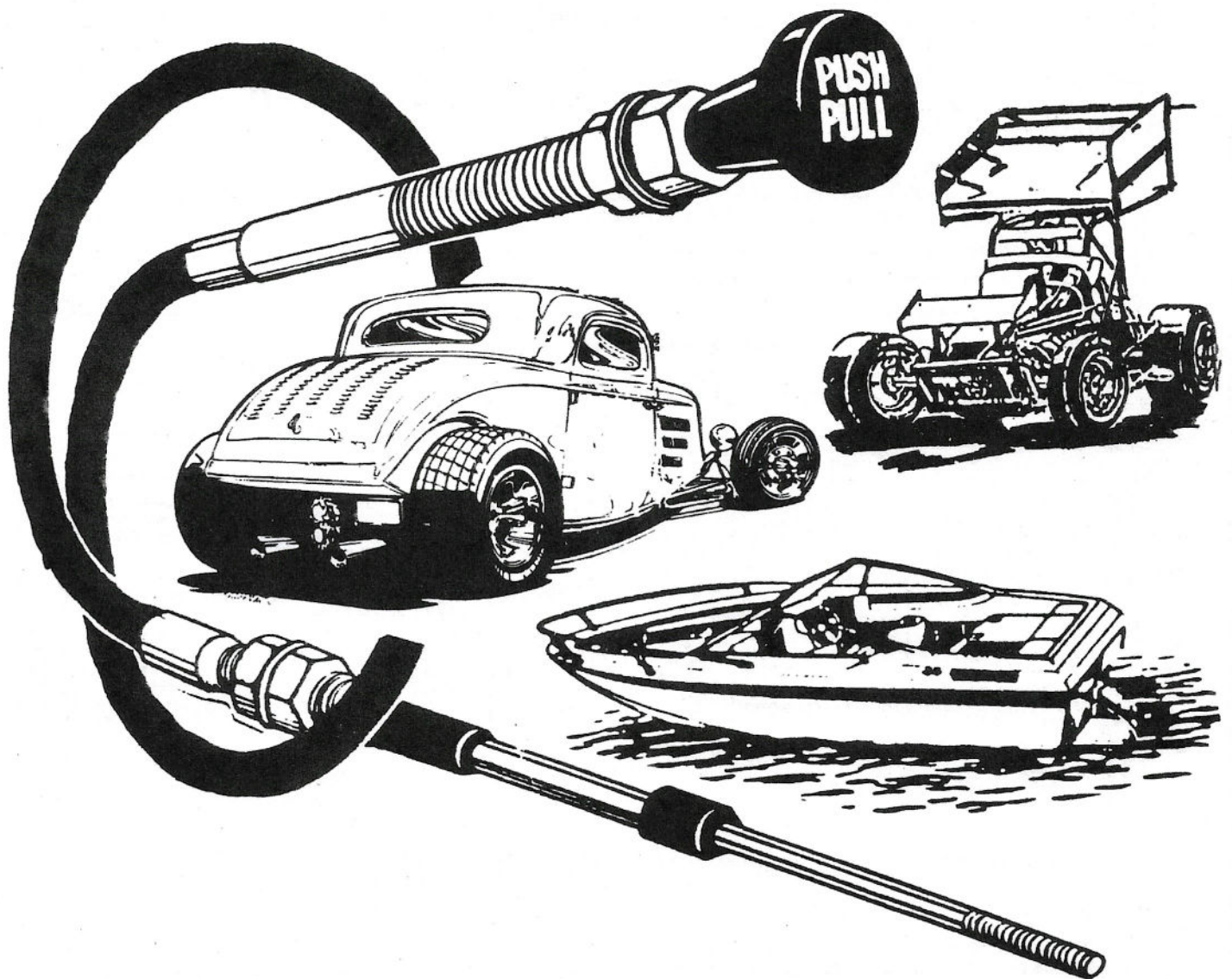


CALIFORNIA PUSH-PULL, INC.



• **SPECIALIZING IN CUSTOM BUILT CABLES** •

3 COMMERCE CT., STE. 130 • CHICO, CA 95928

530-893-4060 FAX 530-893-4062

Website: <http://www.push-pull.com> • E-mail: info@pushpull.com



CALIFORNIA PUSH-PULL INC.

Locally Assembled Cable Controls

with Threaded or Grooved Conduit End Fittings

Part Number Code

SAMPLE PART NO. 173-MTG-2-90

Construction

- 173—Utility with stainless end rods.
- 174—Marine utility with stainless end rods, stainless support tube and stainless armor inner member.
- 313—Low Friction with all plastic wear surfaces and stainless steel end rods.
- 314—Marine Low Friction with all plastic wear surfaces, stainless steel end rods, and stainless steel swivel support tubes.

Duty (load carrying capacity)

Available in: V (Very light duty), L (Light duty), M (Medium duty), H (Heavy duty). Determine by load or end rod diameter from table A below.

Conduit End Fittings

TT (Threaded fittings both ends), GG (Grooved fittings both ends), TG (Threaded fitting one end and Grooved on the other). See table A and diagram B below for dimensions.

Length of Travel

1 to 6 inches. Determine from table A and diagram C below.

Length Overall (in inches)

A Duty Load capacities and length of travel

ALL CABLES					THREADED CONDUIT END FITTINGS							GROOVED CONDUIT END FITTINGS											
Basic Part Number	Thread "F"	Min. Bend Radius Inches	Pull Load Capacity All Travels Pounds	Push Load Capacity for Travel Shown in pounds					Thread "W"	Dimension "A" for Travel Shown in inches						Groove Dimension		Dimension "A" for Travel Shown in inches					
				1" & 2"	3"	4"	5"	6"		1"	2"	3"	4"	5"	6"	Radius Inches	Root Diam. Inches	1"	2"	3"	4"	5"	6"
V	10-32 x 0.89	2	120	80	70	60	45	30	7/16-20 x 1.12"	4.38	5.87	7.38	8.87	10.38	11.87	.13 (width)	.25	3.69	5.19	6.69	8.19	9.69	11.13
L	1/4-28 x 1.00	3	230	150	125	100	75	50	5/8-18 x 1.50"	4.62	6.12	7.62	9.12	10.62	12.12	.17	.41	4.00	5.50	7.00	8.50	10.00	11.50
M	5/16-24 x 1.19	5	400	250	210	170	130	100	11/16-16 x 1.75"	5.06	6.56	8.06	9.56	11.06	12.56	.17	.47	4.33	5.87	7.38	8.87	10.38	11.87
H	3/8-24 x 1.38	6	1,000	700	600	500	400	300	7/8-14 x 2.00"	5.69	7.19	8.69	10.19	11.69	13.19	.20	.50	5.19	6.69	8.19	9.69	11.19	12.69

MM conversions: 1 inch = 25.4 mm. V = M5x.8 L = M6x1.0 M = M8x1.25 H = 10x1.5

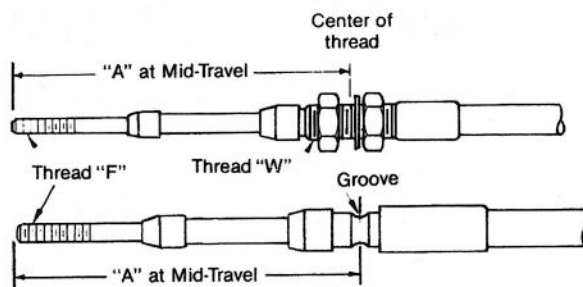
B Conduit End Fittings

Type T

Threaded Conduit End Fitting for bulkhead mounting

Type G

Grooved Conduit End Fitting for mounting with U-bolts or clamps.



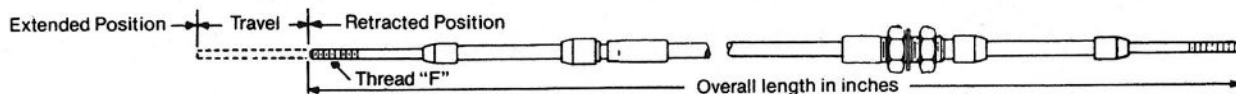
C Overall length and travel in inches

FOR REPLACEMENT CABLES

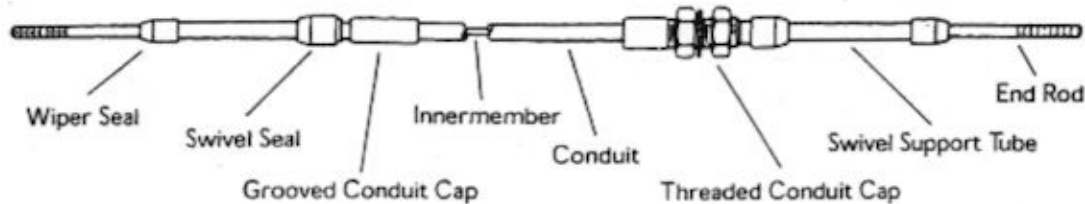
- A. Remove old cable.
- B. Measure length as shown below.
- C. Measure length of travel. 1" through 6."
- D. Determine size of thread "F."
Select basic part number from Table above.

FOR NEW CABLES

- A. Determine overall length.
- B. Measure travel required. Add 1/4" and then round upward to nearest whole inch.
- C. Determine loads and select Basic part number from Table A.



Standard Push-Pull Cable Terminology

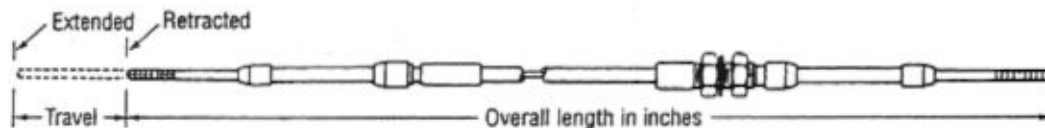


How to Identify Push-Pull Cables

Your goal is to determine the information required to make up the "ordering code" or part number. An example of a typical ordering code is **173-VTG-3-144**.

173	-	V		TG	-	3	-	144
Step 5		Step 1		Step 2		Step 3		Step 4

- Step 1:** Determine the "duty" (size) of the cable by the diameter and threads of the end rods. **V** = 10-32, **L** = 1/4-28, **M** = 5/16-24, **H** = 3/8-24.
(Very light duty; Light duty; **Medium**; **Heavy**)
- Step 2:** Determine the type of **conduit end** fittings (conduit caps) for left end and right end.
T = Threaded, **G** = Grooved. TT, GG or TG combinations.
- Step 3:** Determine the **travel** of the end rod. 1" through 6" in one inch increments.

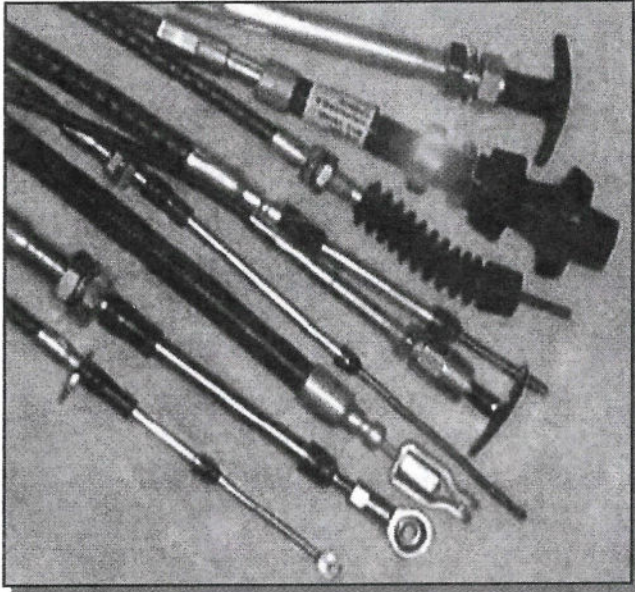


- Step 4:** Determine the overall **length** of the cable.
- Step 5:** Determine cable materials depending on usage and conditions.
See details of 173, 174, 175 *Utility* and 313, 314, 315 *Low-Friction EXT*.

Utility: "The Rugged Gray Cable," is the industry standard and is designed for a long life under rugged conditions (173, 174, 175).

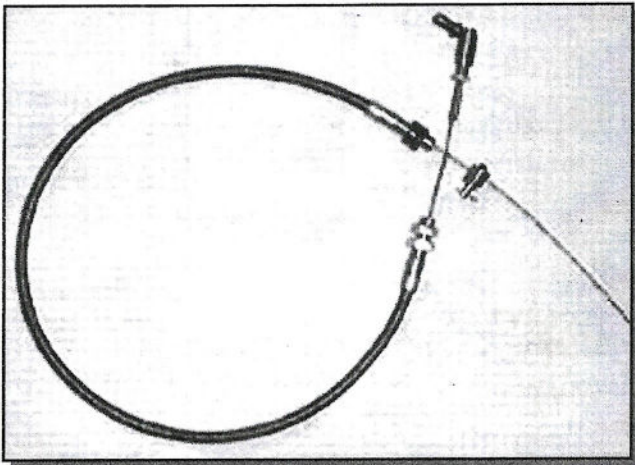
Low-Friction - EXT: "The Green Cable," is the proper cable to use when superior efficiency is required. The extruded nylon cover over the innermember works extremely smoothly with the poly liner (313, 314, 315).

**CABLECRAFT CABLES
CUSTOM LENGTHS**



**THROTTLE-SHIFT-CLUTCH
BLOWER-PARACHUTE-CUSTOM**

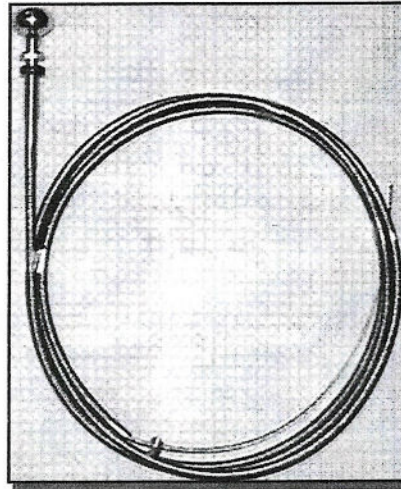
**BRAIDED STAINLESS THROTTLE CABLE
PART NUMBER—SST-24**



- TRIM TO LENGTH - 24 INCHES
- CUSTOM SCREW ON FITTING
- TEFLON LINED HOUSING
- QUICK RELEASE BALL JOINT

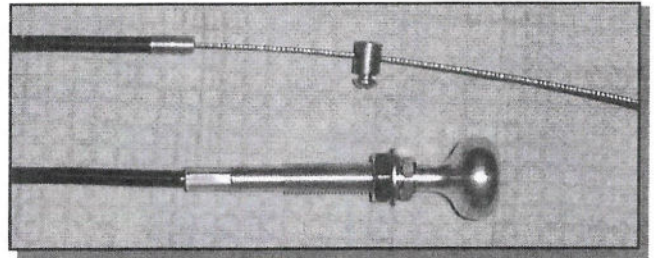
**ENCO THROTTLE CABLE
SAME AS ABOVE BUT WITH BLACK
TEFLON LINE HOUSING-36 INCHES
PART NUMBER--BLT-36**

**BILLET UNIVERSAL CABLE-STAINLESS
HOUSING
7 FT LONG
PART NUMBER—BUC-84S**

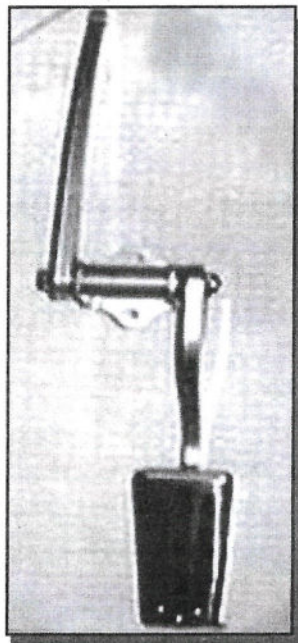


- TRIM TO LENGTH
- CUSTOM BILLET
KNOB

**BILLET UNIVERSAL CABLE-BLACK
HOUSING - 10 FT LONG
PART NUMBER—BUC-120**

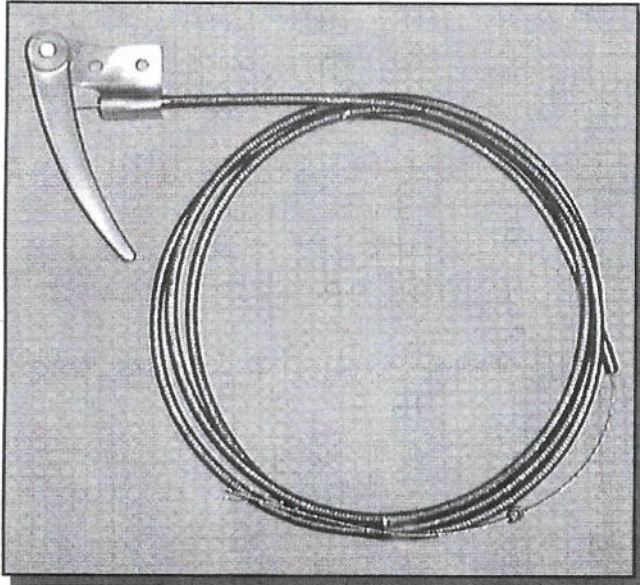


**BILLET TROTTLER PEDAL
PART NUMBER—ATP**



- OIL LITE BUSHING
- SPRING LOADED
- SPLINED SHAFT

**HOOD LEVER CONTROL
PART NUMBER-RLS-84**



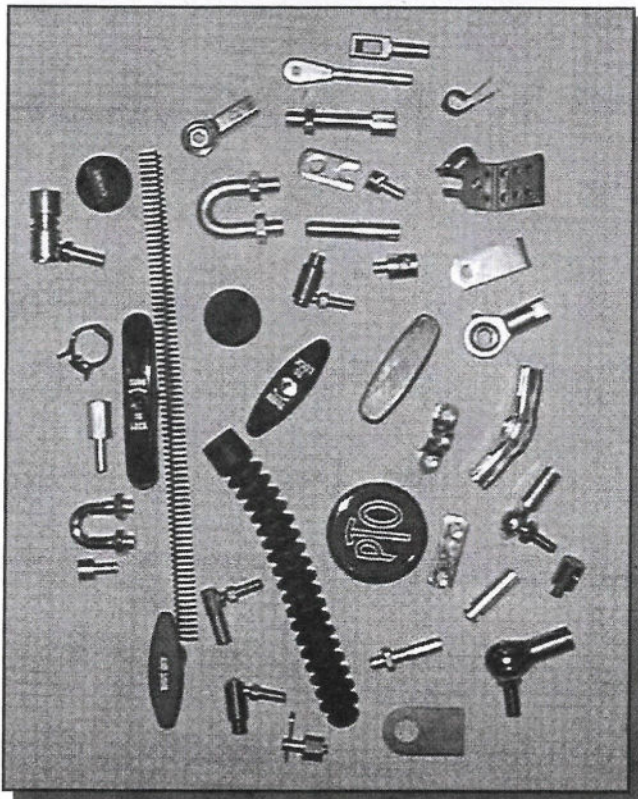
- **BILLET CONSTRUCTION**
- **U-CUT TO FIT**
- **7 FT STAINLESS HOUSING**

**HOOD CONTROL LEVER
PART NUMBER-RL-84**



- **BILLET CONSTRUCTION**
- **U-CUT TO FIT**
- **7 PFT BLACK HOUSING**

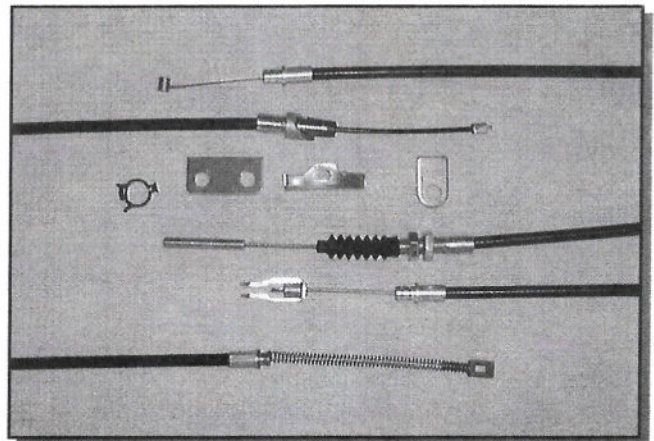
HARDWARE



**BALL-JOINT+CLEVISES+ROD ENDS
KNOBS+CABLE ANCHORS**

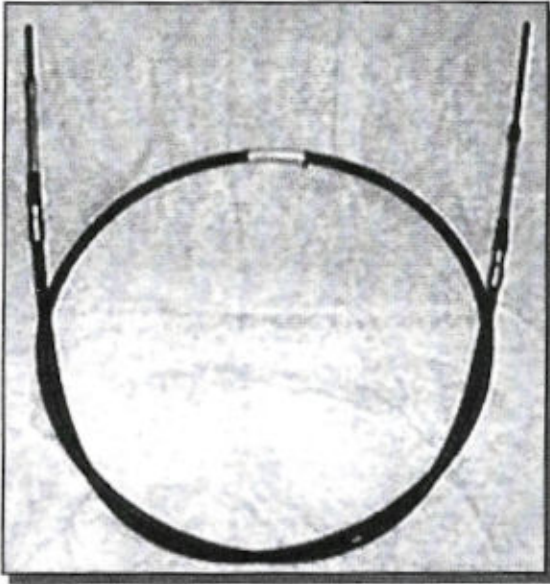
**DECK LEVER CONTROL NOT SHOWN
SAME AS ABOVE BUT WITH 15 FT
HOUSING PART NUMBER-RL-15**

BRAKE CABLES



- **CUSTOM BUILT TO YOUR SPEC.**
- **OEM STYLE HOUSING**
- **SWAGED CONSTRUCTION**

**MARINE THROTTLE CABLES
STANDARD AND CUSTOM LENGTH**



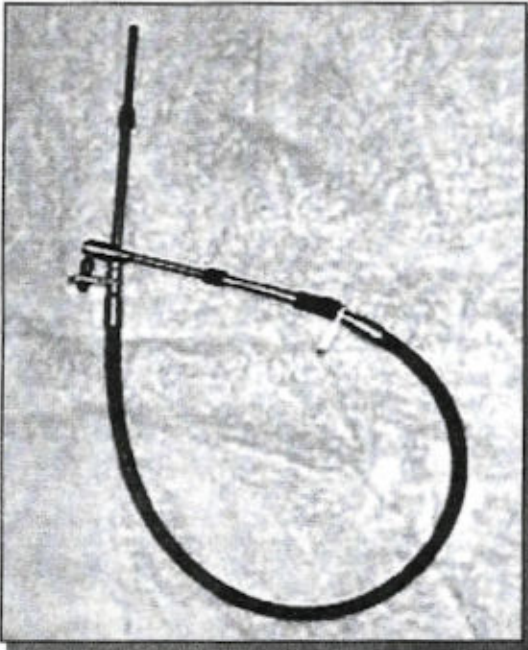
- THROTTLE CABLES
- STAINLESS STEEL RODS TUBES
- STAINLESS STEEL INNER MEMBER
- PART NUMBER 174-VGG-3-LENGTH

**MARINE SHIFT CABLES
STANDARD AND CUSTOM LENGTH**



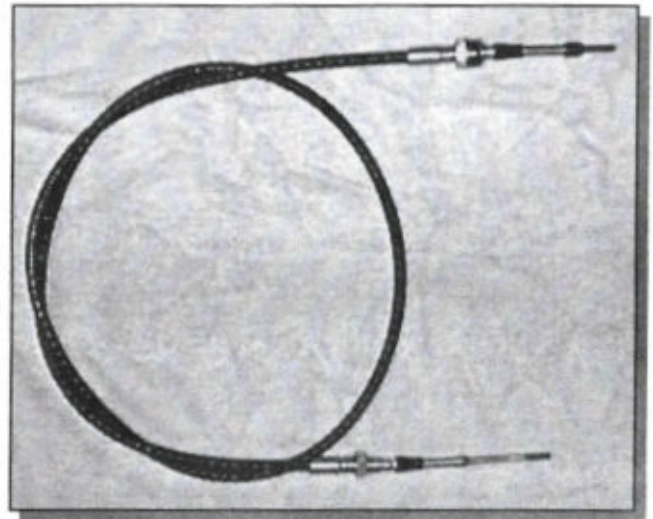
- SHIFT CABLES
- STAINLESS STEEL RODS TUBES
- CUSTOM LENGTHS
- PART NUMBER 174-LTG-3-LENGTH

BLOWER CABLES



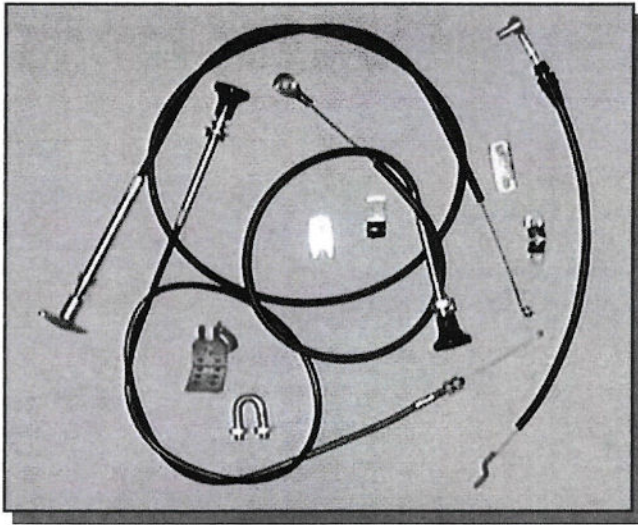
- CUSTOM LENGTHS
- 3' BEND RADIUS
- PART NUMBER 173-VGG-3-LENGTH

CUSTOM THROTTLE CABLES



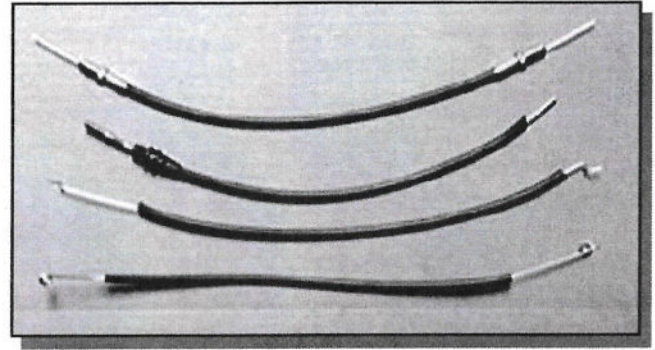
- 10/32 ROD ENDS
- 3 INCH BEND RADIUS
- PART NUMBER 173-VTT-3-LENGTH

SPECIALTY CABLES



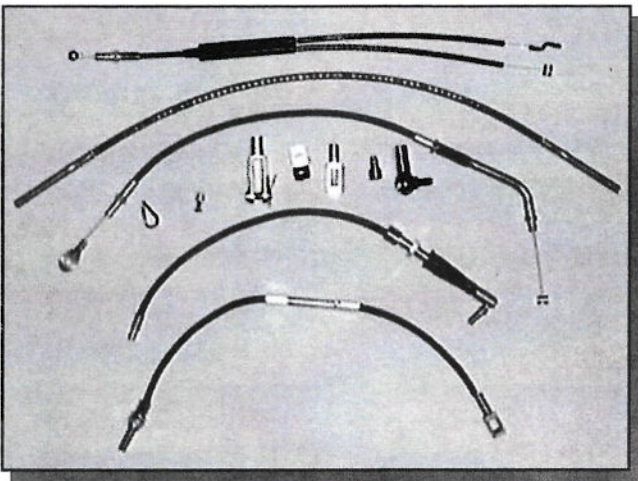
- PARACHUTE CABLES
- VENT CONTROL CABLES
- FUEL DOORS

VENT CONTROL CABLES



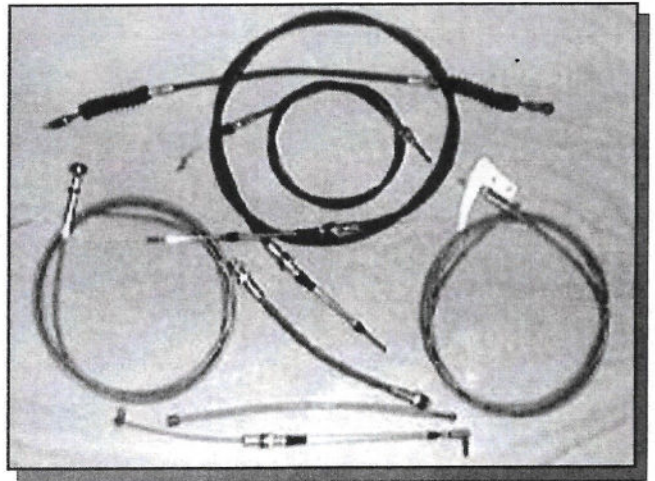
- PIG TAILS CABLES
- Z BEND CABLES
- CUSTOM LENGTHS
- POWER WINDOW CABLES

CUSTOM MOTOR TRIKE CABLES



- THROTTLE CABLES
- CLUTCH CABLES
- SINGLE IN DUEL OUT
- CUSTOM LENGTHS

CUSTOM STREET ROD CABLES



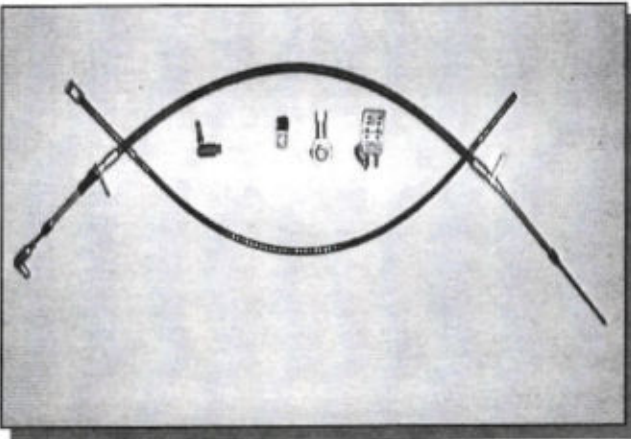
- THROTTLE CABLES
- SHIFT CABLES
- CHOKE CABLES
- FUEL SHUT OFF CABLES

SPECIALTY SHIFT CABLES



- FIERO SHIFT AND SELECT CABLES.
- CUSTOM SHIFT CABLES FOR SPECIALTY CARS

SAND BUGGIE CABLES



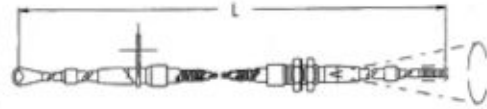
- SHORTEN VW CLUTCH CABLES
- THROTTLE CABLES
- MOUNTING BRACKETS

AUTO SHIFT CABLES

Automotive shift cables

Replacements for popular brand shift cables.
Order Code: X=3 for Carbon Steel, X=4 for Stainless Steel; L=Length

B&M® shift
Part No. CA248-X-L



Dodge® Motor Home
Part No. CA249-X-L



Hurst® Shift
Part No. CA273-X-L

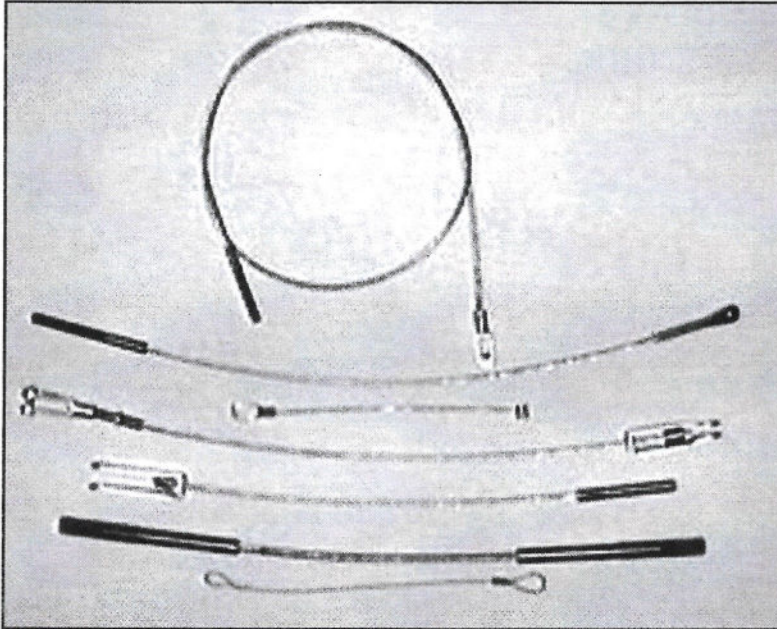


Hurst® Shift
Part No. CA274-X-L



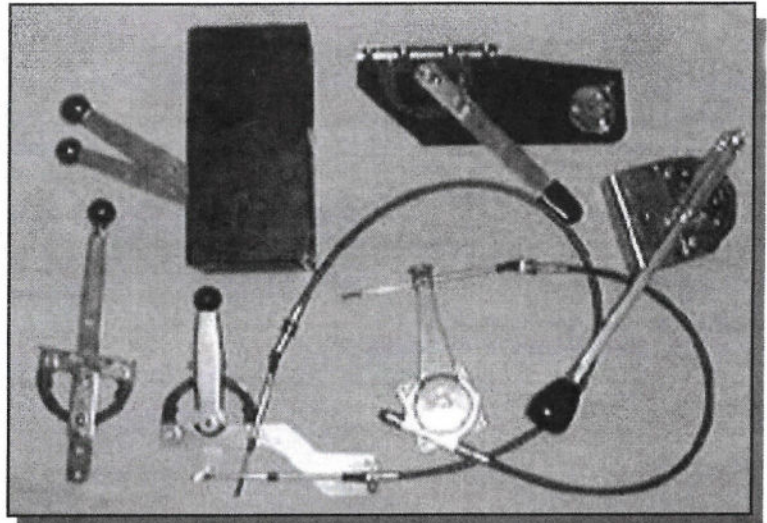
- B&M SHIFT CABLES
- DODGE MOTOR HOME
- HURST SHIFTER CABLES
- STANDARD & CUSTOM LENGTHS

CUSTOM WIRE ROPE CABLES



- CUSTOM SWAGED CABLES
- CABLES MADE TO ORDER
- CUSTOM ENDS

CUSTOM LEVER CONTROLS



RATCHETING BRAKE LEVER

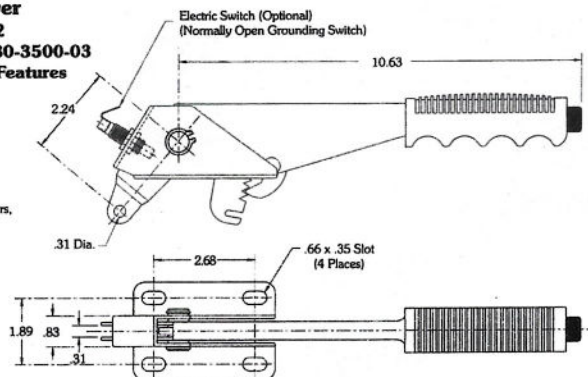
Ratcheting Brake Lever

Part Number - 80-3500-02

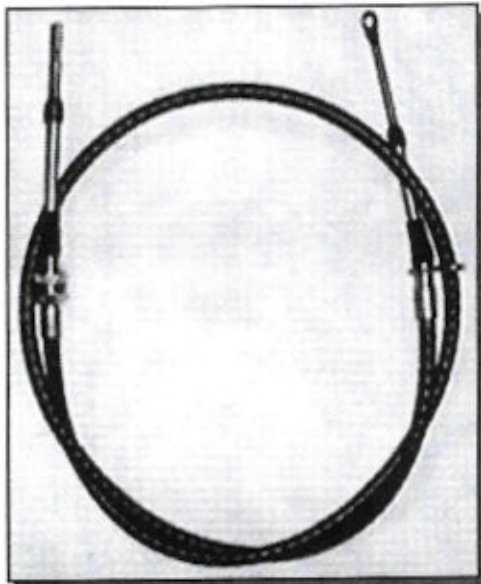
Part Number w/ Switch - 80-3500-03

Typical Applications and Features

- Flange mount for lift trucks, golf carts, utility vehicles, lawn and garden tractors, stand alone trailer park brakes.
- Lever Travel = 1.50 inches.
- Lever Ratio = 4 to 1

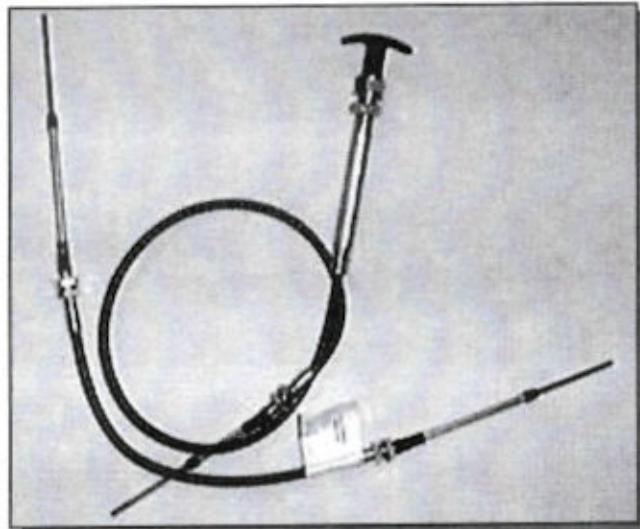


B & M SHIFT CABLE



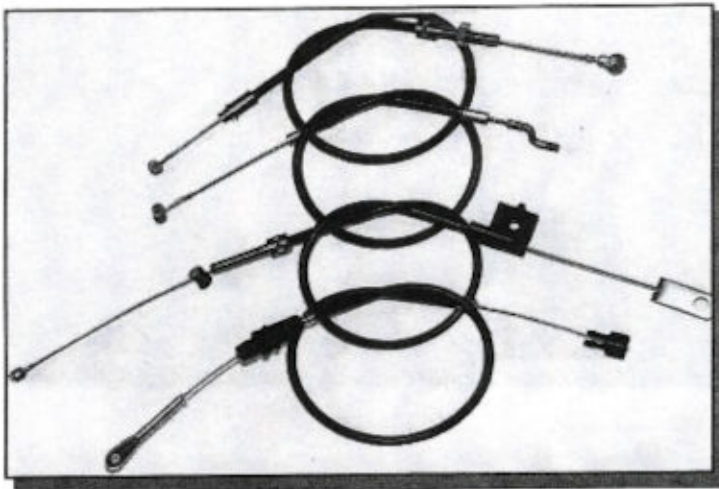
- CUSTOM AND STANDARD LENGTH
- HEAVY DUTY CONSTRUCTION
- STAINLESS RODS AND TUBES

SPRINT CAR SHIFT AND THROTTLE CABLES



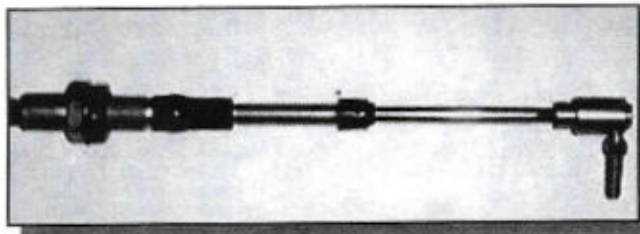
- CUSTOM AND STANDARD LENGTHS
- HIGH QUALITY-LOW BEND RADIUS
- STAINLESS RODS AND TUBES

MISCELLANEOUS CABLES



- CUSTOM CABLE FOR ANY APPLICATION
- BUILT TO YOUR SPECIFICATION
- REPLACEMENT FOR HARD TO FIND CABLES

STAINLESS THROTTLE LINKAGE PART NUMBER—STL-6



- MOUNTS FROM FIREWALL TO
- CARBURETOR

Control Head Cables



Standard and Custom Length Push-Pull Cables



SPECIALTY CABLES

Choke conversion kit



Chrome T-handle choke cable



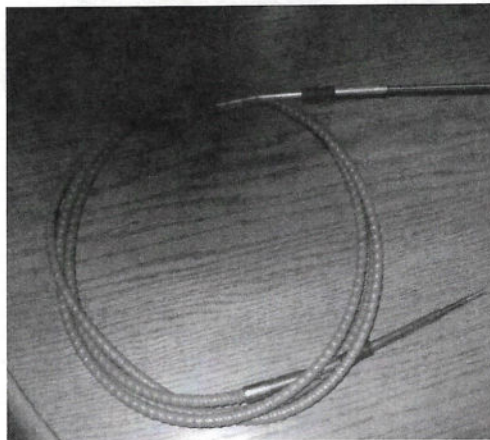
Fire bottle cable



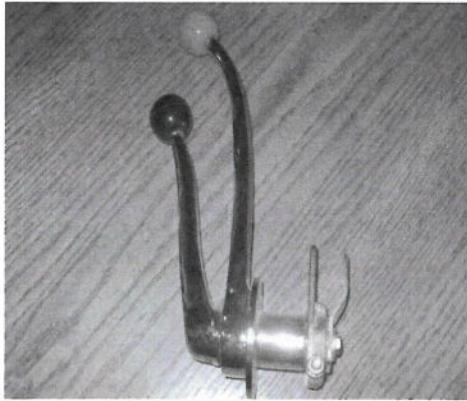
SeaDoo cable



Jet ski cable



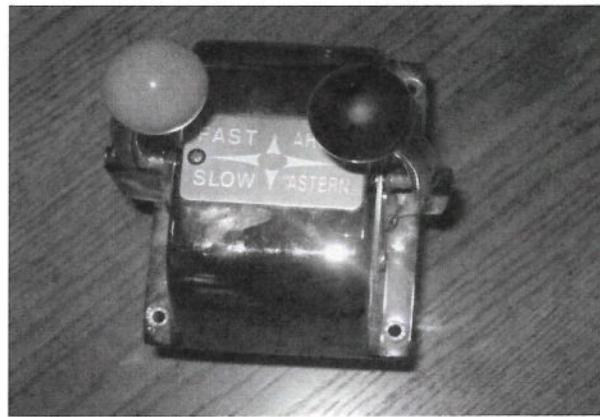
MARINE DUAL LEVER SIDE MOUNT



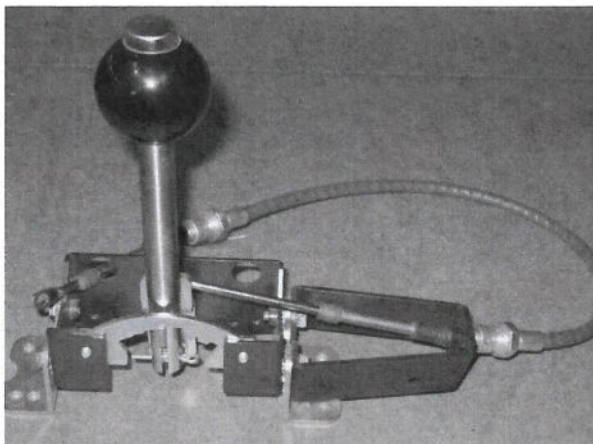
MARINE SINGLE LEVER SIDE MOUNT



MARINE DUAL LEVER SYSTEMS



GM CABLE SHIFT LEVER



GM SHIFT CABLE



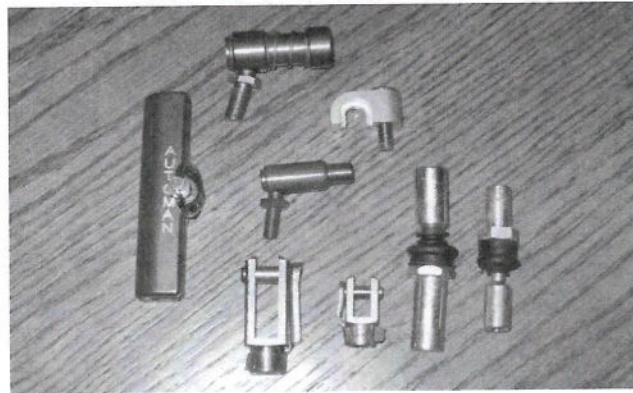
SPECIALTY HARDWARE

IN-LINE BALL JOINTS

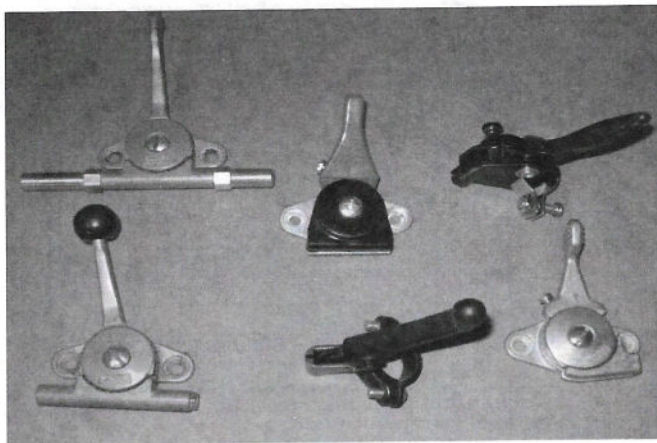
MACHINED CLEVISES

ALUMINUM BALL JOINTS

SPECIALTY CLAMPS

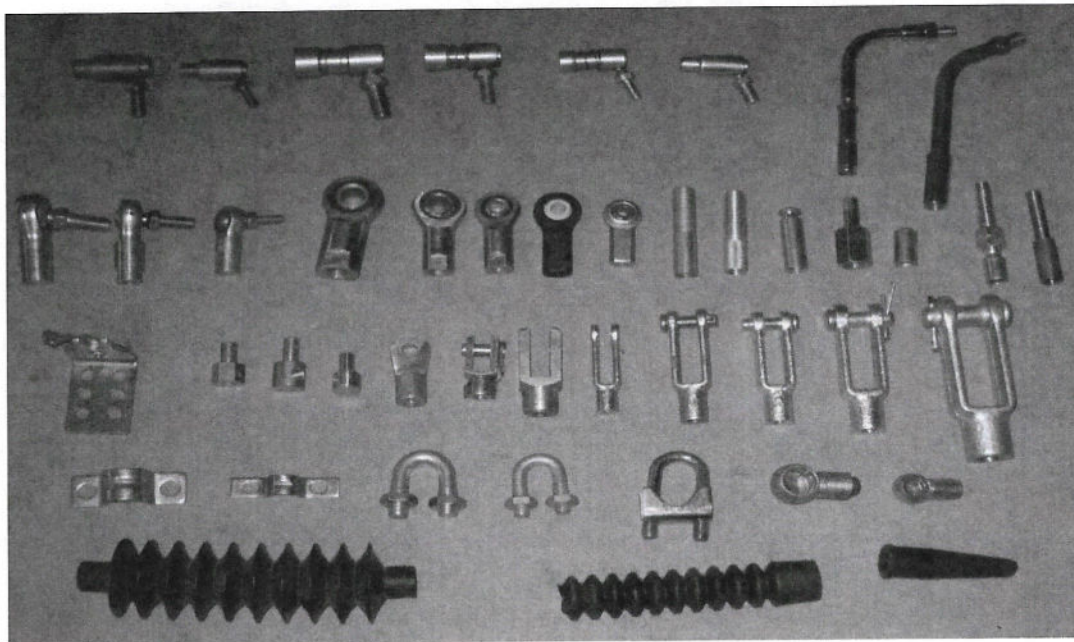


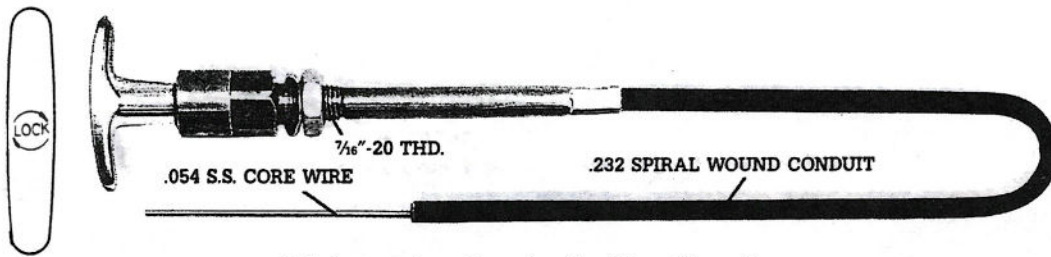
MINI LEVERS



FULL LINE ON MINI LEVERS

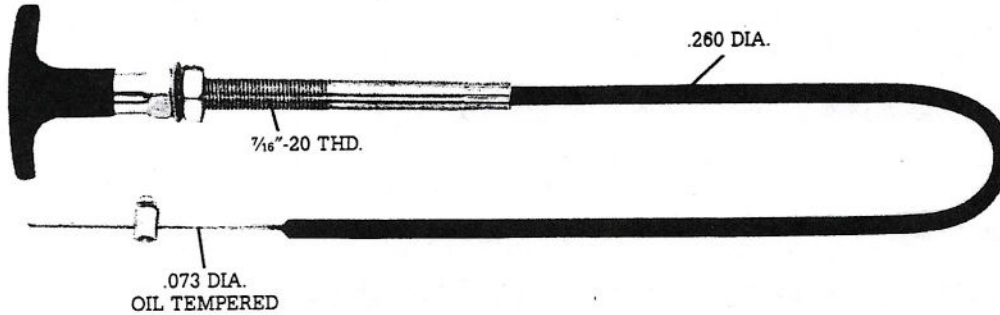
ACCESSORY HARDWARE





Spiral wound can be cut with side cutting pliers.

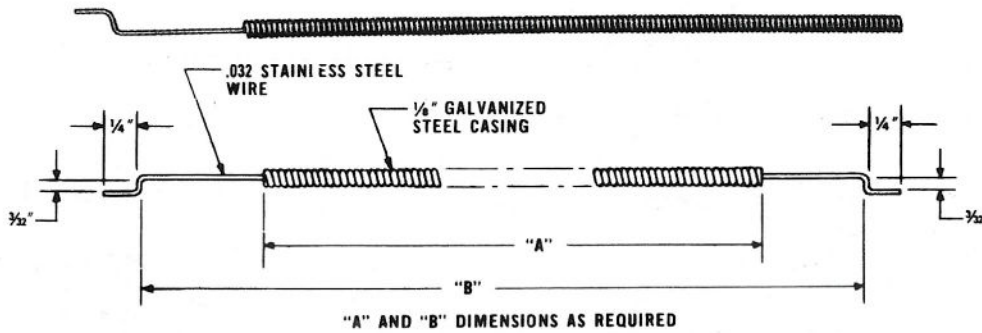
LIGHT DUTY TWIST LOCK



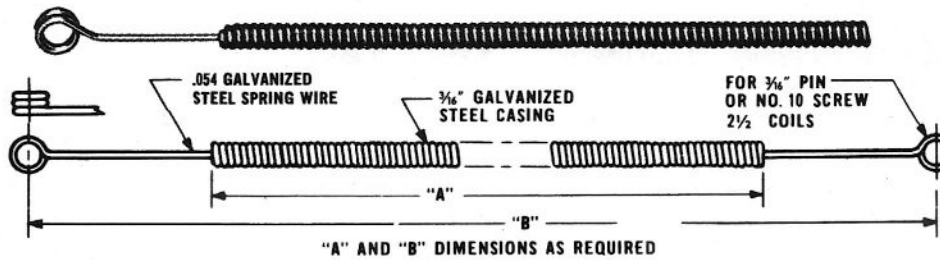
MEDIUM DUTY TWIST LOCK



LIGHT DUTY CHOKE CABLE



Light Load Connector Controls



CLEVIS ASSEMBLIES

Includes Pin, Washer and Cotter Pin

PART NUMBER	THREAD	PIN DIA.	LENGTH	INSIDE OPENING	INSIDE DEPTH
175-601-202	10-32 UNF	3/16"	1.56"	.19"	1.00"
175-601-204	10-32 UNF	1/4"	2.00"	.29"	1.30"
175-601-206	1/4-28 UNF	1/4"	2.00"	.29"	1.30"
175-601-210	1/4-28 UNF	5/16"	2.25"	.34"	1.44"
175-601-208	5/16-24 UNF	1/4"	2.00"	.29"	1.30"
175-601-212	5/16-24 UNF	5/16"	2.25"	.34"	1.44"
175-601-216	5/16-24 UNF	3/8"	2.50"	.44"	1.63"
175-601-214	3/8-24 UNF	5/16"	2.25"	.34"	1.44"
175-601-218	3/8-24 UNF	3/8"	2.50"	.44"	1.63"
175-601-222	3/8-24 UNF	7/16"	2.88"	.50"	1.88"
175-601-487	3/8-24 UNF	1/2"	3.00"	.57"	1.88"
175-601-220	7/16-20 UNF	3/8"	2.50"	.44"	1.63"
175-601-226	1/2-20 UNF	7/16"	2.88"	.50"	1.88"
175-601-230	1/2-20 UNF	1/2"	3.00"	.57"	1.88"



Length is from center of pin to end of barrel.

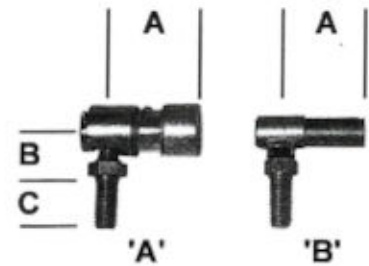
SLIP CLEVIS

PART NUMBER	THREAD	P/N DIAMETER	LENGTH	INSIDE OPENING	INSIDE DEPTH
AC310	1/4-28 UNF	1/4"	3.25"	.28"	2.5"



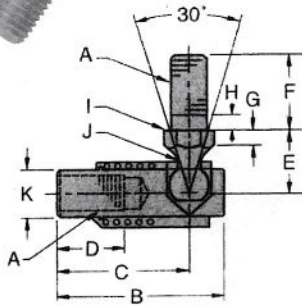
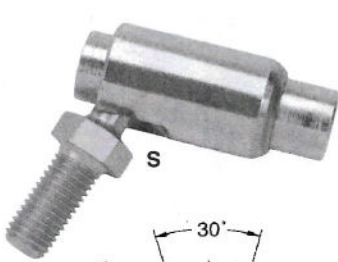
QUICK DISCONNECT BALL JOINT CONNECTORS

PART NUMBER	STYLE	INTERNAL THREAD	STUD THREAD	A	B	C
		X	Y			
175-403-005	B	NO. 10-32 UNF	1/4-28 UNF	0.88	0.44	0.56
175-403-004	B	1/4-28 UNF	1/4-28 UNF	0.97	0.44	0.56
175-403-003	B	NO. 10-32 UNF	NO. 10-32 UNF	0.88	0.44	0.44
175-403-002	A	5/16-24 UNF	5/16-24 UNF	1.13	0.53	0.69
175-403-001	A	1/4-28 UNF	1/4-28 UNF	0.97	0.47	0.56
175-403-060	A	1/4-28 UNF	5/16-24 UNF	0.97	0.47	0.69
175-403-061	B	5/16-24 UNF	3/8-24 UNF	1.13	0.53	0.87

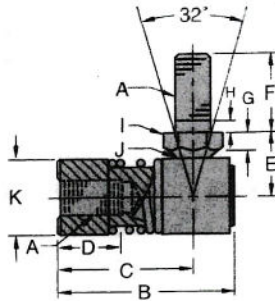


S/SS/SC Ball Joints

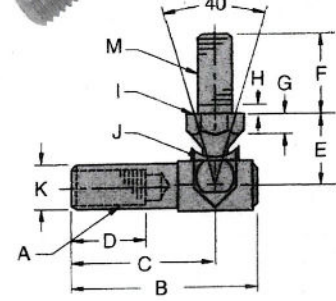
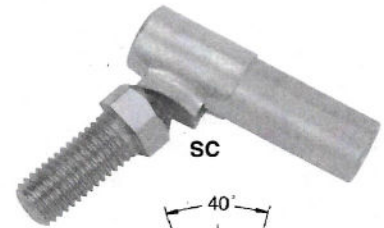
Quick Disconnect with Spring or Spring Clip



Type S



Type SS



Type SC

S/SS/SC CHART

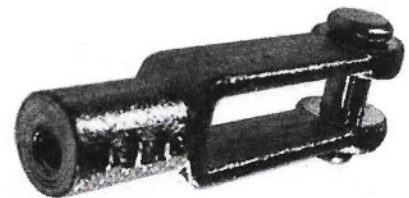
Part Number	A UNF	B ±.020	C ±.020	D MIN	E ±.020	F ±.020	G .REF	H REF	I REF	J REF	K REF	M UNF	Ball Diameter REF
S103	10-32	1.094	.906	.437	.437	.437	.125	.062	.312	.171	.312	—	.253
S107S	1/4-28	1.094	.906	.531	.469	.562	.141	.062	.312	.171	.312	—	.253
SS1002	1/4-28	1.250	.969	.531	.469	.562	.125	.078	.375	.192	.561	—	.345
SS1003	5/16-24	1.453	1.125	.594	.531	.687	.125	.094	.437	.224	.625	—	.403
SS1004	3/8-24	1.750	1.375	.812	.687	.875	.156	.109	.500	.273	.750	—	.491
SC103	10-32	1.156	.875	.484	.437	.437	.187	.078	.312	.135	.312	10-32	.250
SCS103	10-32	1.156	.875	.484	.437	.562	.125	.078	.312	.135	.312	1/4-28	.250
SC107	1/4-28	1.250	.969	.531	.437	.562	.125	.078	.312	.135	.312	1/4-28	.250
SCS107	1/4-28	1.250	.969	.531	.437	.437	.125	.078	.312	.135	.312	10-32	.250

CLEVIS ASSEMBLIES

Includes Pin, Washer and Cotter Pin

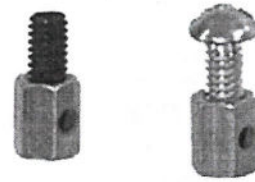
PART NUMBER	THREAD	PIN DIA.	LENGTH	INSIDE OPENING	INSIDE DEPTH
175-601-202	10-32 UNF	3/16"	1.56"	.19"	1.00"
175-601-204	10-32 UNF	1/4"	2.00"	.29"	1.30"
175-601-206	1/4-28 UNF	1/4"	2.00"	.29"	1.30"
175-601-210	1/4-28 UNF	5/16"	2.25"	.34"	1.44"
175-601-208	5/16-24 UNF	1/4"	2.00"	.29"	1.30"
175-601-212	5/16-24 UNF	5/16"	2.25"	.34"	1.44"
175-601-216	5/16-24 UNF	3/8"	2.50"	.44"	1.63"
175-601-214	3/8-24 UNF	5/16"	2.25"	.34"	1.44"
175-601-218	3/8-24 UNF	3/8"	2.50"	.44"	1.63"
175-601-222	3/8-24 UNF	7/16"	2.88"	.50"	1.88"
175-601-487	3/8-24 UNF	1/2"	3.00"	.57"	1.88"
175-601-220	7/16-20 UNF	3/8"	2.50"	.44"	1.63"
175-601-226	1/2-20 UNF	7/16"	2.88"	.50"	1.88"
175-601-230	1/2-20 UNF	1/2"	3.00"	.57"	1.88"

Length is from center of pin to end of barrel.



WIRE STOP

PART NUMBER	HOLE SIZE	SET SCREW
156-416-001	.138"	8-32 UNC HEX SOCKET
156-416-002	.093"	8-32 UNC HEX SOCKET
160-429-001	.138"	8-32 UNC SLOTTED
160-429-002	.093"	8-32 UNC SLOTTED



U-BOLTS

PART NUMBER	THREAD	USE WITH
161-010-001	1/4-28	VLD
161-010-002	5/16-24	LD
161-010-003	5/16-24	MD
161-010-004	3/8-24	HD



These U-Bolts are furnished with 2 hex nuts.

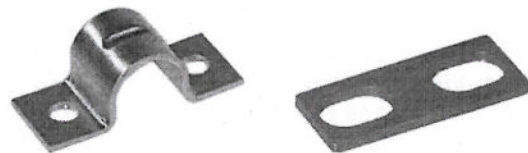
**VLD/LD MOUNTING CLAMP
FITS GROOVED CONDUIT FITTING**

PART NUMBER
ST3652



STRAP CLAMPS AND SHIMS

USE WITH	STRAP	SHIM
VLD	161-011-001	175-435-050
LD	161-011-002	175-435-051



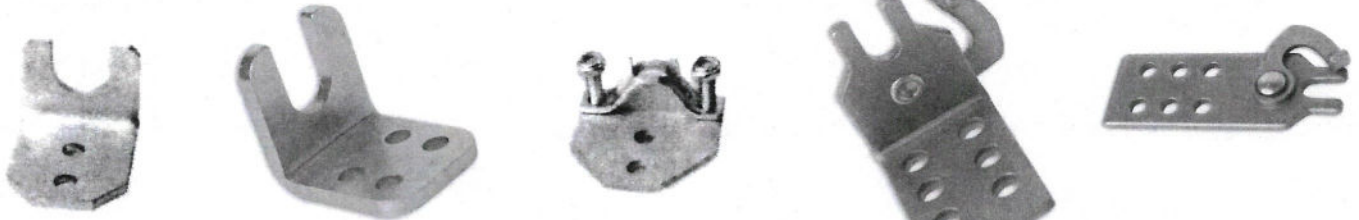
STUDED ROD EYE

PART NUMBER	INTERNAL THREAD	STUD THREAD
BRE 32 S	10/32	10/32
BRE 52 S	1/4	1/4
BRE 62 S	5/16	5/16
BRE 72 S	3/8	3/8



THREADED PIVOTS

PART NUMBER	INTERNAL THREAD	STUD THREAD
10/32 PIVOT	10-32	1/4"
1/4 PIVOT	1/4-28	1/4"



Bulkhead Bracket - Fits Light & Medium Duty Push Pull Cables

VLD Bulkhead Bracket (Very Light)

Cable Groove Mount - Fits Light & Medium Duty Push Pull Cables

VLD Swingover (Very Light Duty)

VLD Swingover Straight

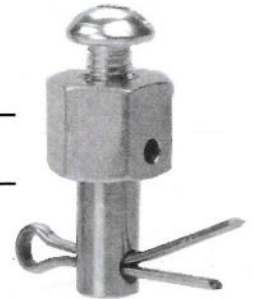
END ROD THREAD ADAPTERS

PART NUMBER	FROM (INTERNAL)	TO (EXTERNAL)
161-009-001	1/4-28	3/8-28
161-009-003	10-32	5/16-24
161-009-005	1/4-28	3/8-16
161-009-006	5/16-24	3/8-24
161-009-007	10-32	1/4-28

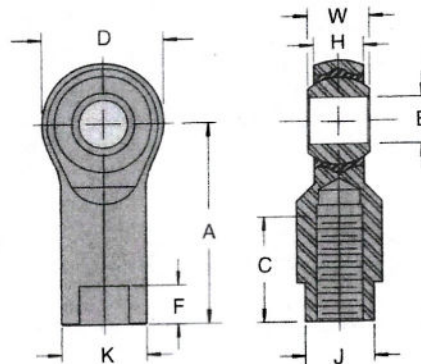


WIRE STOP/PIVOT

PART NUMBER	WIRE	PIN DIA.	SET SCREW
SS 91	.075"	1/4"	10-32 UNF



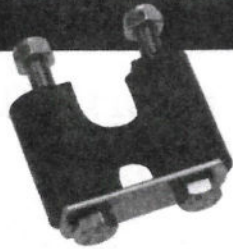
FEMALE ROD EYE



SPF Female Chart

Part Number		B +.0020 -.0000	W ±.005	H REF	A ±.015	D ±.015	K ±.015	J ±.015	F ±.030	REF	C ±.060	UNF-2B	Ultimate Radial Static Load Capacity (Pounds)	Weight (Pounds)
Right Hand	Left Hand	Ball Bore	Ball Width	Housing Width	Centerline Length	Head Diameter	Shank Diameter	Wrench Flat Width	Wrench Flat Length	Ball Diameter	Thread Length	Thread Size		
SPF3	SPFL3	.1900	.312	.250	1.062	.625	.406	.312	.406	.438	.562	10-32	1,210	.036
SPF4	SPFL4	.2500	.375	.281	1.312	.750	.469	.375	.281	.516	.750	1/4-28	2,470	.059
SPF5	SPFL5	.3125	.437	.344	1.375	.875	.500	.437	.281	.625	.750	5/16-24	2,740	.077
SPF6	SPFL6	.3750	.500	.406	1.625	1.000	.687	.562	.312	.719	.937	3/8-24	4,100	.146
SPF7	SPFL7	.4375	.562	.437	1.812	1.125	.750	.625	.625	.812	1.031	7/16-20	5,350	.192
SPF8	SPFL8	.5000	.625	.500	2.125	1.312	.875	.750	.375	.938	1.187	1/2-20	6,430	.313
SPF10	SPFL10	.6250	.750	.562	2.500	1.500	1.000	.875	.500	1.125	1.500	5/8-18	8,300	.464
SPF12	SPFL12	.7500	.875	.687	2.875	1.750	1.125	1.000	1.000	1.312	1.562	3/4-16	10,900	.672

VLD/LD Mounting (fits grooved conduit fitting)



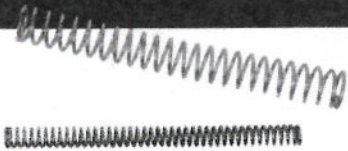
Part Number
ST3652

Strap Clamps and Shims



Use With	Strap	Shim
VLD	161-011-001	175-435-050
LD	161-011-002	175-435-051

Compression Springs (for brake cables)



Part Number	Inside Dia.	Outside Dia.	Length	Solid Height	Spring Rate
175-923-001	.30	.437	12.0	4.6	3.93lb/inch
175-923-002	.30	.437	6.4	3.20	5.75lb/inch
175-923-006	.30	.437	5.7	2.87	6.23lb/inch
175-923-001	.26	.437	10.0	6.62	15.97lb/inch
175-923-003	.40	.500	4.3	1.00	4.47lb/inch

Bellows (trim to length)



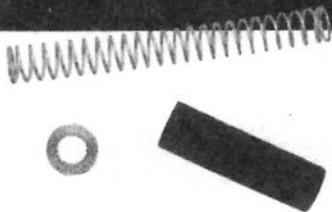
Adapter Ring

Part Number	For Use With Cable Size
175-522-072	VLD
175-524-081	LD
175-525-082	MD

Part Number	For Use With Cable Size	Compressed Length	Extended Length	Max Travel
175-522-001	VLD	3.0"	12.0	4.6"
175-524-002	LD	3.4"	6.4	3.2"
175-525-006	MD	4.5"	5.7	2.87"
175-508-001	HD	3.5"	10.0	6.62"

Maximum recommended is shown, must be trimmed shorter for use on shorter travel cables. See cutting matrix #CC-111. Adapter Rings to mount bellows to conduit fittings.

Spring Return Kit

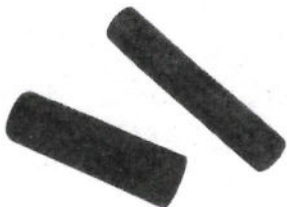


Convert any LD size, 2" travel threaded swivel end to spring loaded to extended position

Force with end rod extended - 4.6lbs
Force with end rod retracted - 15.2lbs

Part Numbers:	Spring	175-930-001
	Collar	175-435-118
	Outer Guide	160-071-025

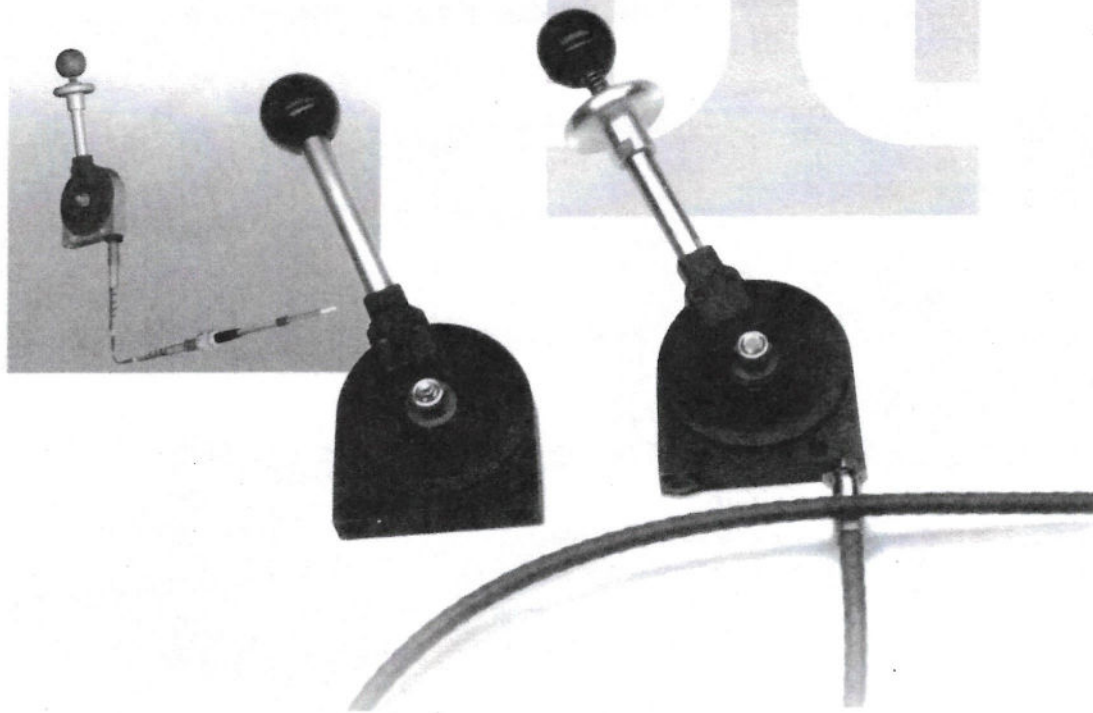
Umbrella Seal



Part Number	For Use With Cable Size
160-071-005	VLD, 2"
160-071-006	VLD, 3"
160-071-007	VLD, 4"
160-071-008	LD, 2"
160-071-009	LD, 3"
160-071-010	LD, 4"
160-071-011	MD, 2"
160-071-012	MD, 3"
160-071-013	MD, 4"

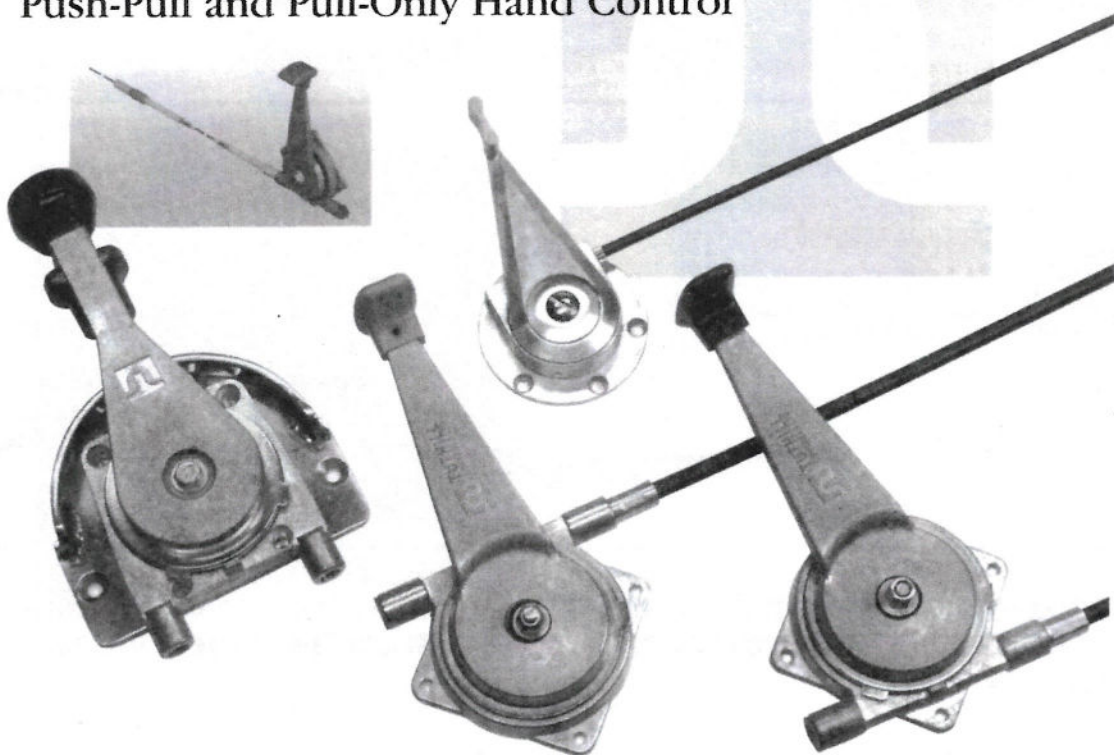
Light Duty Lever

Push-Pull Hand Control



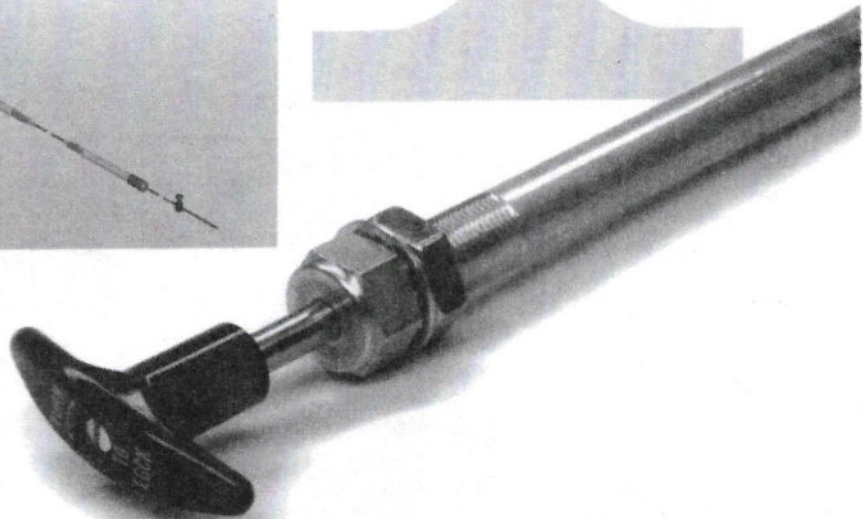
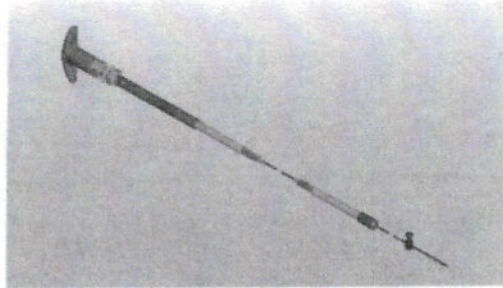
Unidrum Lever

Push-Pull and Pull-Only Hand Control



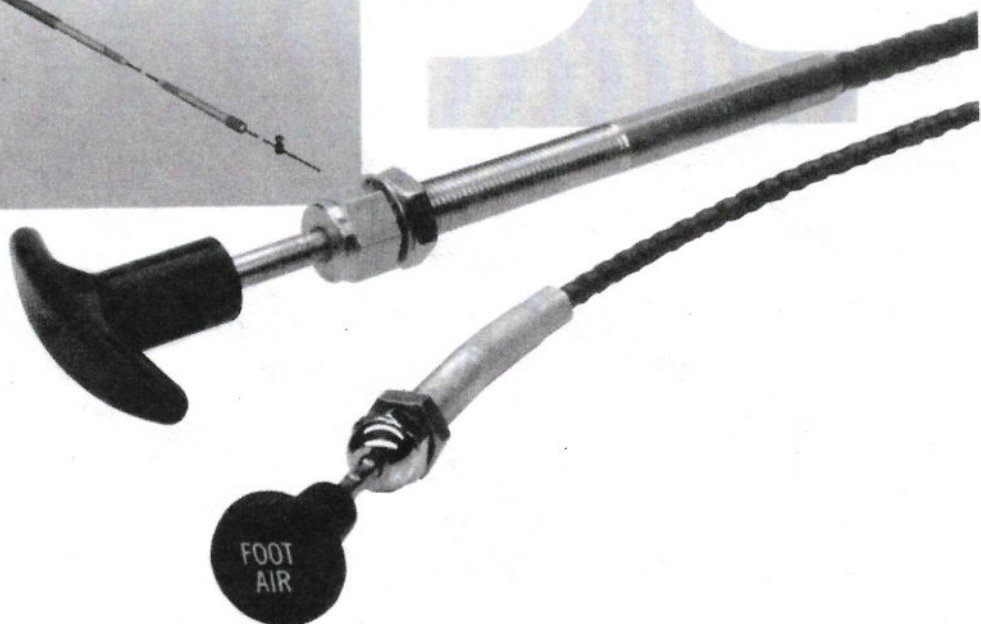
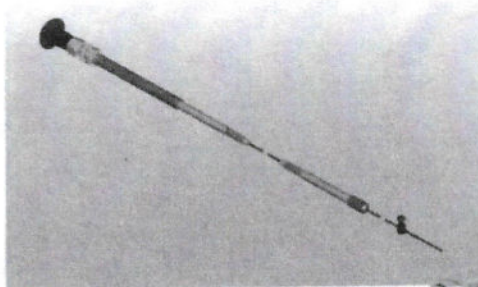
Twist Lock

Push-Pull Control Head



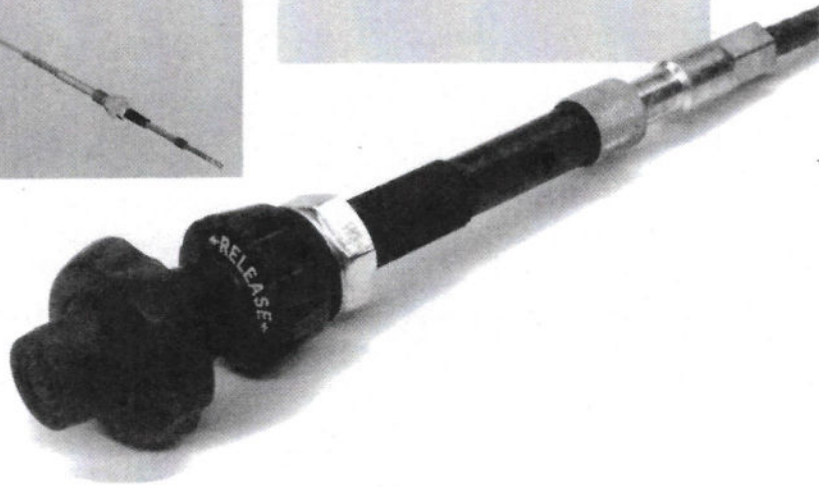
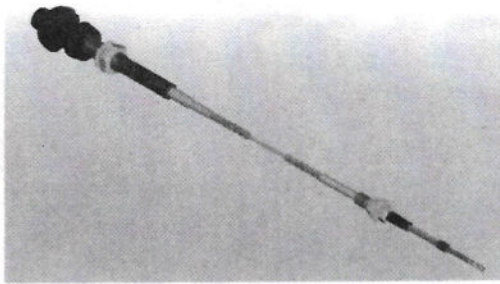
Non Lock

Push-Pull Control Head



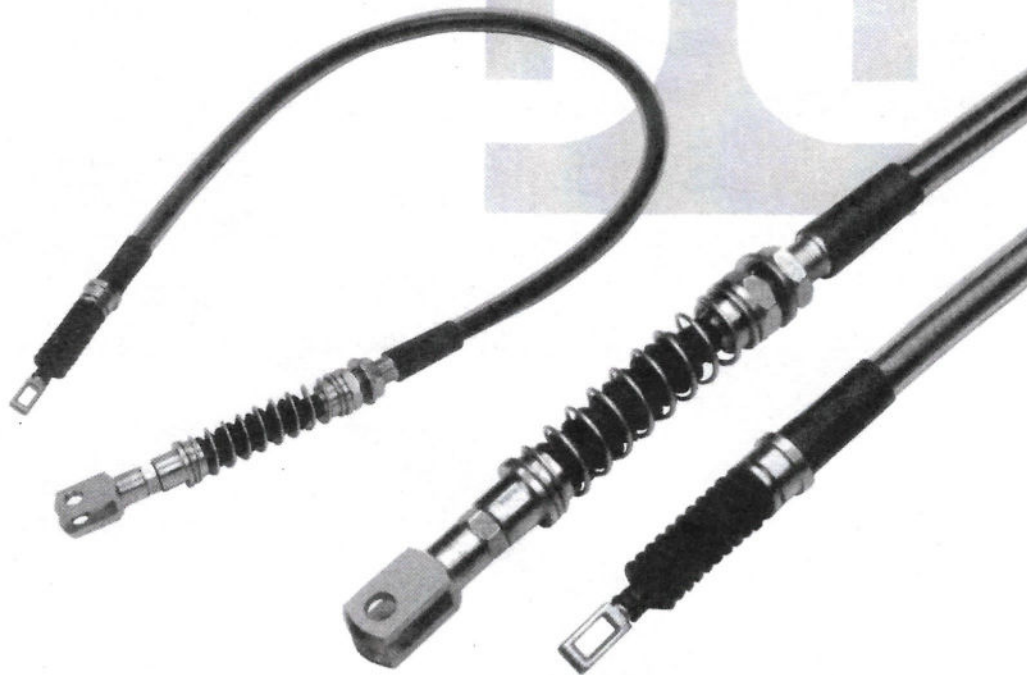
Micro Adjust

Push-Pull Control Head

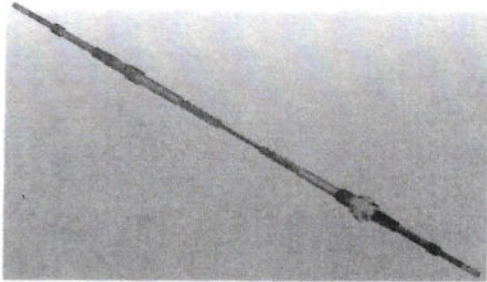


Pull-Only Clutch

Control Cable Assembly



CALIFORNIA PUSH-PULL, INC.



Tuthill Controls new Blue Max™ industrial marine cable offers extreme low friction with minimal loss of motion. This superior design is excellent for long runs with complicated cable routing while being extremely efficient at shorter runs as well. Allows the smoothest feel with unparalleled performance. The unique blue outer jacket is resistant to abrasions, gasoline, diesel oil, and chemicals and all exposed metal is stainless steel. Sealed and lubed for life of cable, Blue Max™ cables offer a true minimum bend radius of 4".

- All stainless operating components
- Great low load efficiency
- High reliability
- PTFE liner
- Low loss of motion
- True bend radius
- Over a million life cycle rating
- Superior push and pull performance

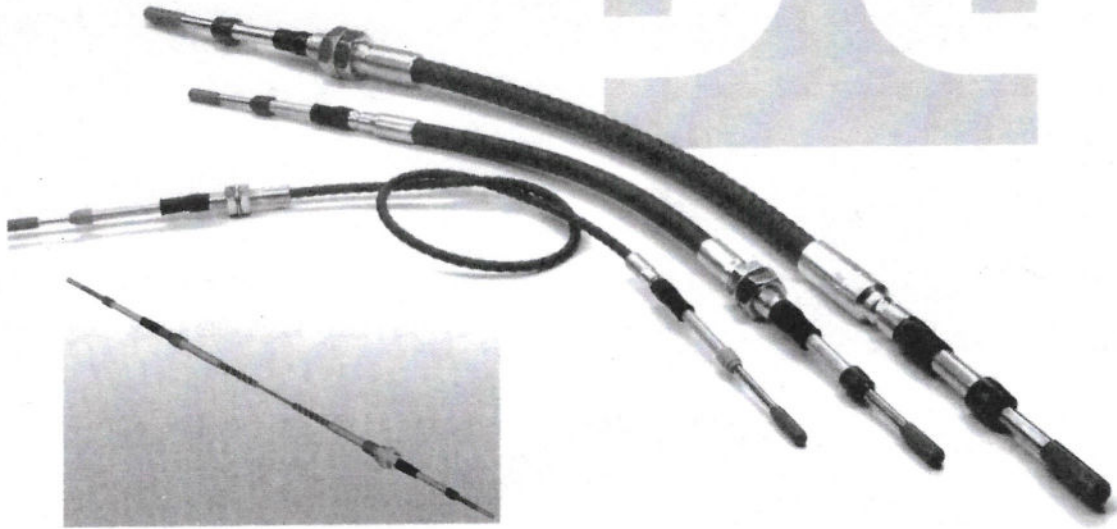
*Linking Motion
& Control...*

CALIFORNIA PUSH-PULL, INC
3 COMMERCE CT SUITE 130
CHICO CA. 95928

Phone: 530-893-4060
Fax: 530-893-4062
Email: SALES@PUSH-PULL.COM

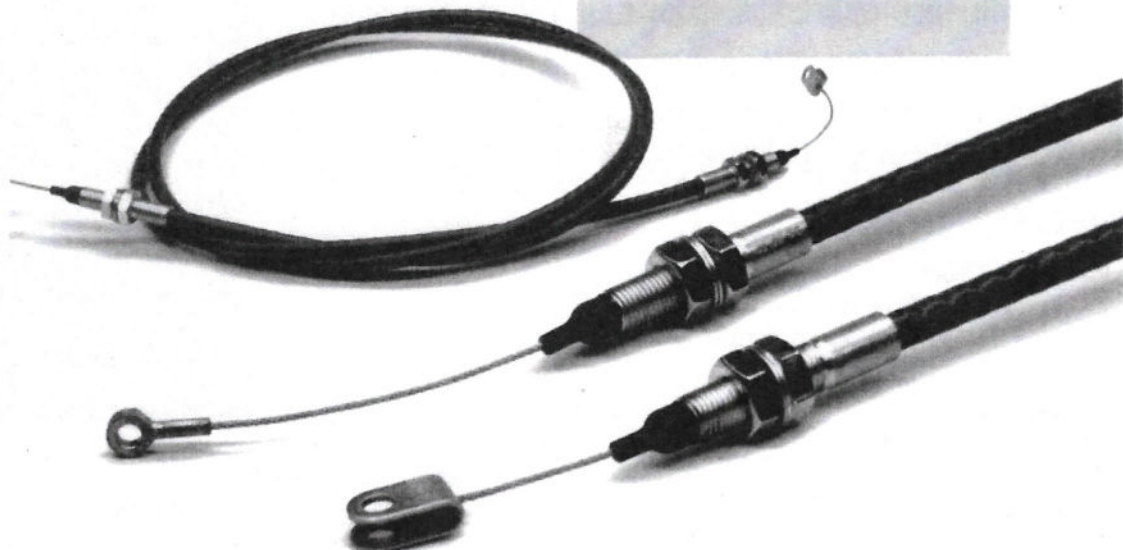
Push-Pull Standard

Control Cable Assembly



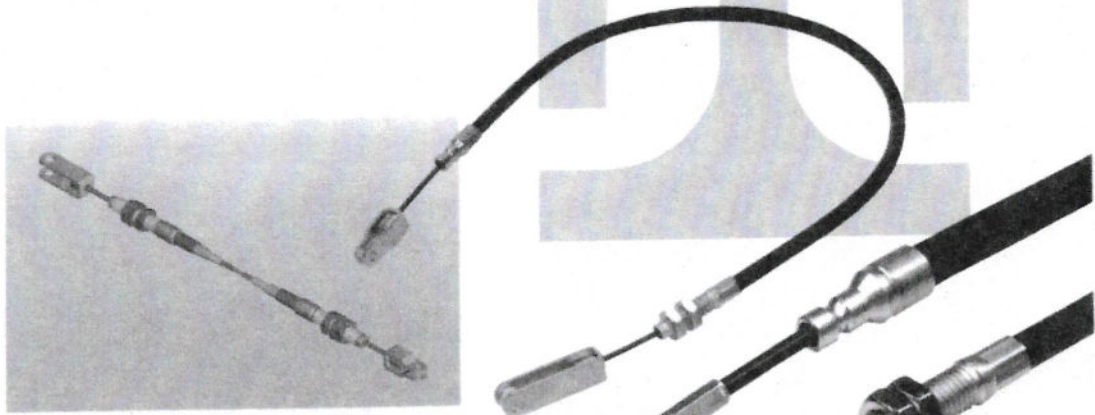
Pull-Only Tension

Control Cable Assembly



Pull-Only Brake

1500 & 3000 Control Cable Assembly

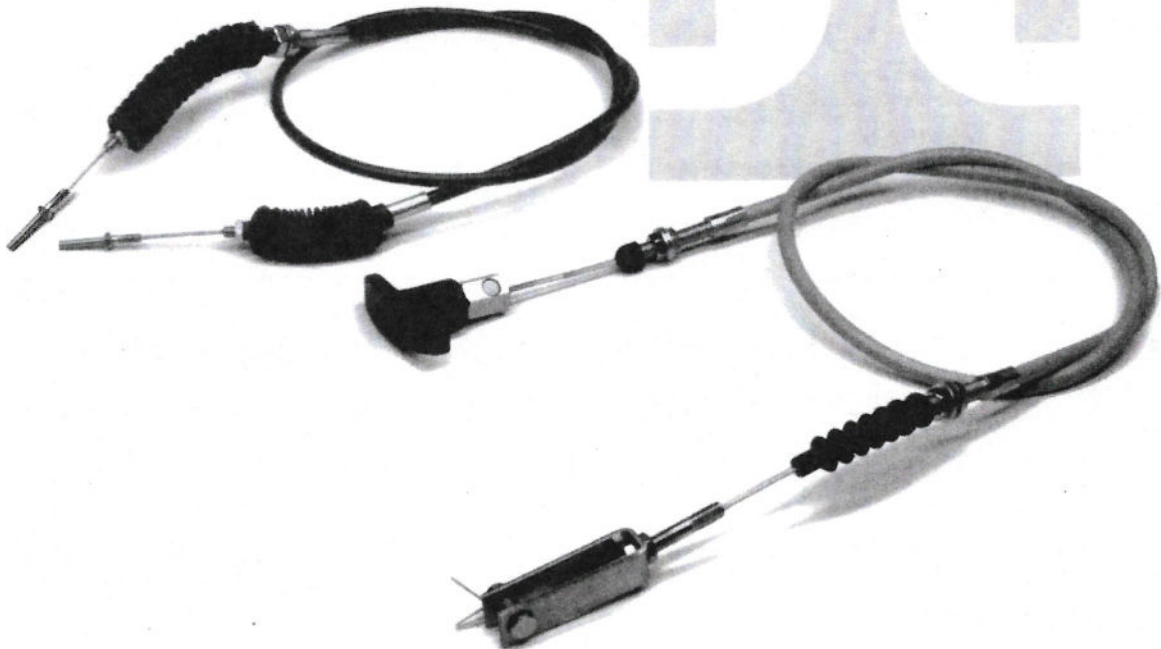


3000 Series Cable
with optional
Threaded End Rod

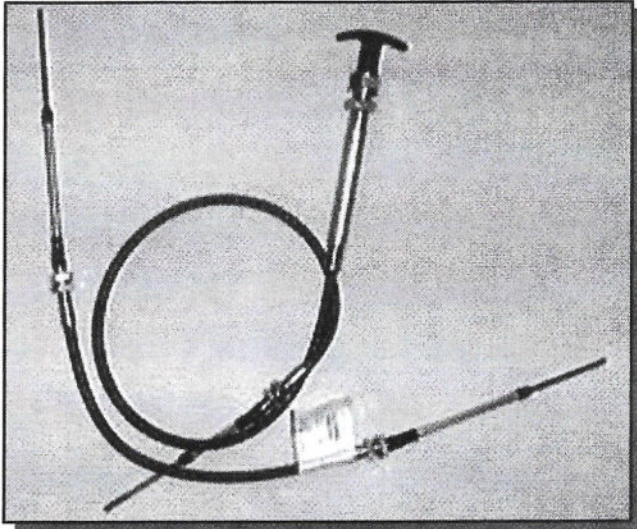
1500 Series Cable
with optional
Strap Clevis

Pull-Only T-Flex

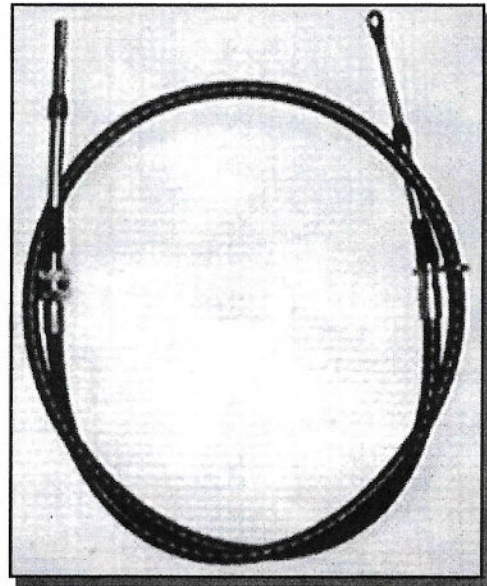
Control Cable Assembly



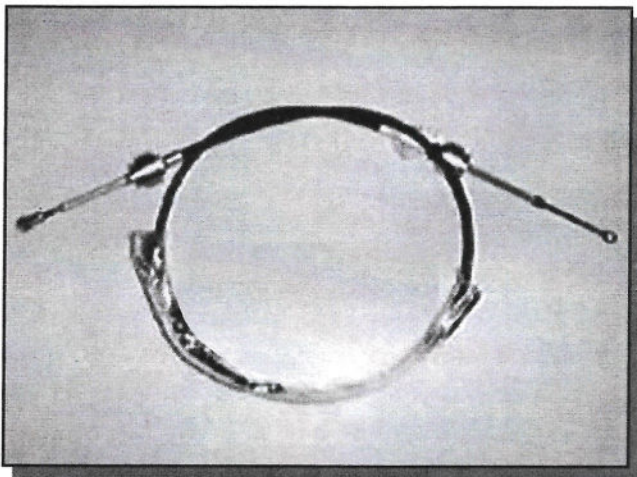
SPRINT CAR SHIFT CABLE



B&M SHIFT CABLES HURST SHIFT CABLES



FIERO SHIFT AND SELECT CABLES



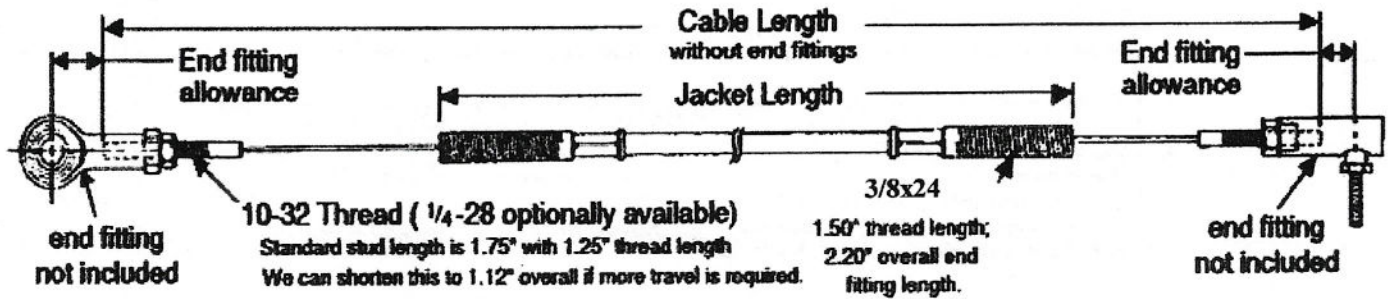
OUR SHIFT CABLES ARE HIGHLY FLEXIBLE AND MADE OF HEAVY DUTY CONSTRUCTION FOR LONG LIFE UNDER RUGGED CONDITIONS. ALL END RODS AND SUPPORT TUBES ARE STAINLESS STEEL AND ALL COMPONENTS ARE SWAGED ON FOR STRENGTH.

WE ARE ABLE TO BUILD ANY SIZE OR LENGTH TO MEET YOUR REQUIREMENTS.

CUSTOM MADE THROTTLE CABLES

These throttle cables use a liner casing for long wear ,smooth operation and are covered by an extruded jacket. A 3/8x24 threaded bulkhead fitting is attached to each end of the jacket. The inner wire is 1/16 x19 stainless steel with swaged 10/32 stainless steel stud at each end (1/4x28 Stainless studs are also available or you can mix and match) These cable are for pull only. A Variety of fittings are available to adapt to the cable studs.

We need three dimensions to complete the cable 1. Jacket length 2. Inner wire length
And 3. The total travel length . Note: Be sure to allow for the fitting you plan to add to the studs



VENT CONTROL CABLES

HCC-LL20-12

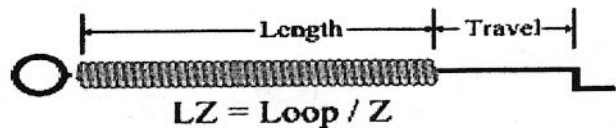
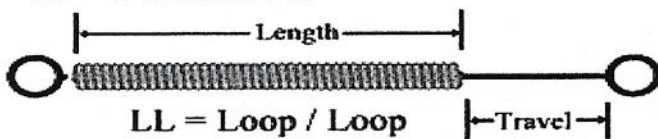
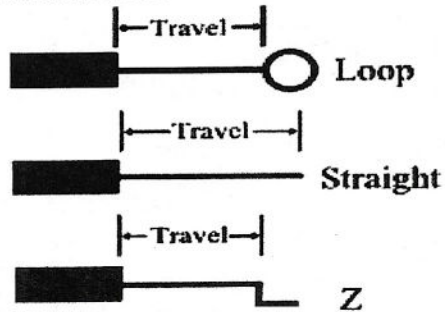
HCC – Heater Control Cable

- LL = Loop / Loop
- LS = Loop / Straight
- LZ = Loop / Z
- KL = Knob / Loop
- KS = Knob / Straight
- KZ = Knob / Z
- TL = T-Handle / Loop
- TS = T-Handle / Straight
- TZ = T-Handle / Z

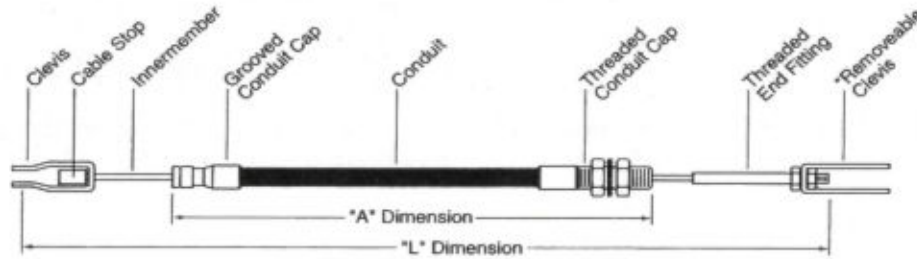
Travel Length

- 20 = 2.0"
- 22 = 2.25"
- 25 = 2.5"
- 27 = 2.75"
- 30 = 3.0"

Length in Inches



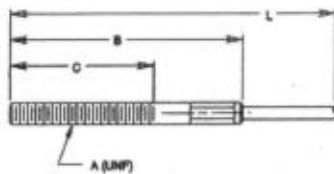
Preliminary Ordering Procedure For pull-only cable controls



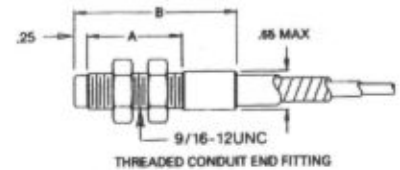
To specify a pull control, the following information must be given in the order listed:

1. Left innermember end fitting part number.
 2. Left conduit end fitting part number.
 3. Length "A" between conduit fitting reference points in inches.
 4. Right conduit end fitting part number.
 5. Right innermember end fitting part number.
 6. Length "L" of innermember assembly between fitting reference points in inches.
 7. Travel of the innermember in the conduit in inches. (Note dimension "L" must be sufficiently greater than dimension "A" to allow desired travel).
- *Removable items may be listed separately.

Threaded End Fitting
1/4 -28



PART NO.	A	B	C
TE 504	5/16-24	3.62	2.25
TE 504-6	5/16-24	2.00	1.00
TE 506	3/8-24	2.62	1.50
TE 523-001	1/4 -28	3.62	2.50

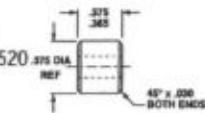


9/16-12UNC
THREADED CONDUIT END FITTING

Threaded Conduit End Fitting

Part No.	A	B
060	1.4	2.7
061	2.1	3.4

Button End
Part No. BE 520



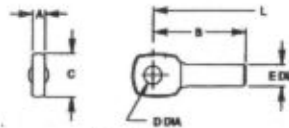
Cable Stop
Part No. BE 501



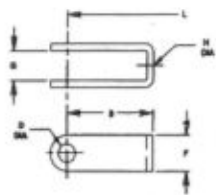
Ball End

Part No.	A	B	C	D	E
Part No. BT 821					
157-047-000	.235	1.81	.75	.323	.375
(Max-load 2,000 lbs.)	157-047-000	.240	1.60	.75	.500 .437

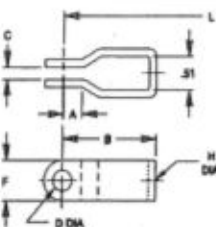
Eye End



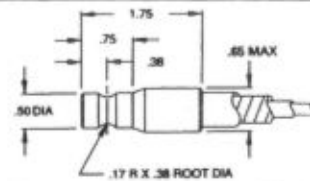
Strap Clevis Part Numbers for both 1500 and 3000 series. (* Not available in 3000)



OPEN STRAP CLEVIS	B	D	F	G	H
CS 540	1.62	.31	.62	.43	.266
CS 540-1	1.62	.31	.62	.51	.266
CS 540-6	2.50	.38	.75	.57	.386
CS 540-7	2.50	.31	.62	.51	.266
CS 541	1.94	.38	.75	.51	.266
CS 541-3	1.94	.38	.75	.51	.323
CS 541-5	2.00	.38	.75	.51	.266
CS 541-7	2.50	.38	.75	.51	.266
CS 541-8	2.50	.38	.75	.51	.323
CS 542	1.08	.50	1.00	.58	.323

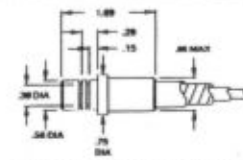


STEP STRAP CLEVIS	A	B	C	D	F	H
CS 550*	.31	1.56	.19	.31	.62	.266
CS 550-1	.31	1.56	.19	.38	.62	.266
CS 550-2	.31	1.56	.19	.31	.62	.316
CS 550-4	.31	1.56	.19	.25	.62	.266
CS 551	.38	1.75	.25	.31	.62	.266
CS 551-1	.38	1.75	.25	.38	.62	.266
CS 551-2	.75	2.38	.25	.31	.62	.316
CS 551-3	.38	1.50	.25	.25	.62	.266
CS 552	.31	2.38	.25	.31	.75	.266
CS 552-1	.31	2.38	.25	.38	.75	.266
CS 552-3	.38	2.38	.25	.43	.75	.316
CS 552-4	.38	2.38	.25	.31	.75	.316
CS 553	.50	1.88	.19	.38	.75	.266



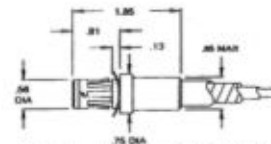
Grooved Conduit End Fitting

Part No.
062



Grooved Conduit End Fitting

Part No.	Use E-Clip
064	175-435-025

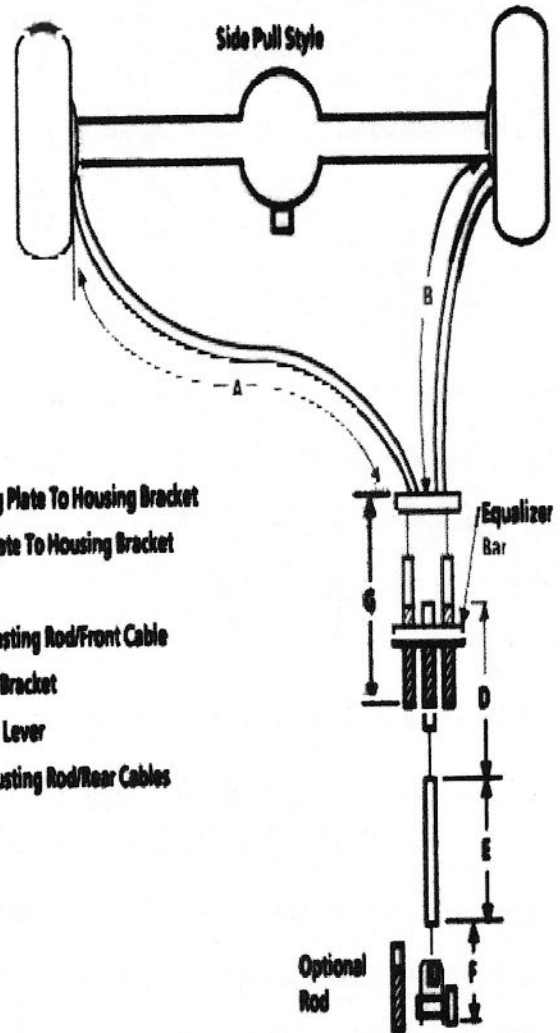
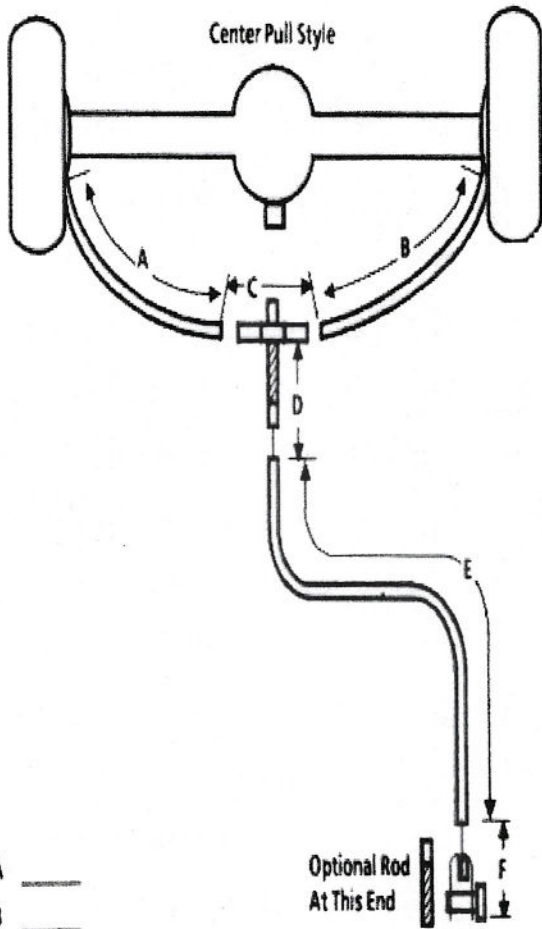


Clip-Lock Conduit End Fitting

Part No.
065

For .125 and .187 thick material.

BRAKE CABLE LAYOUT

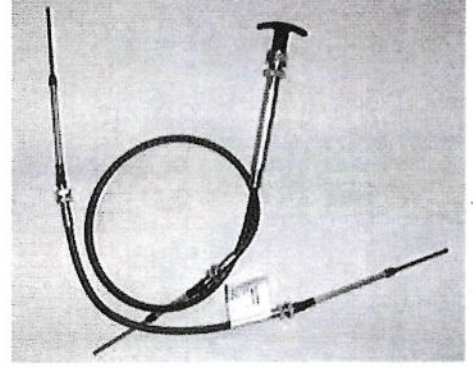
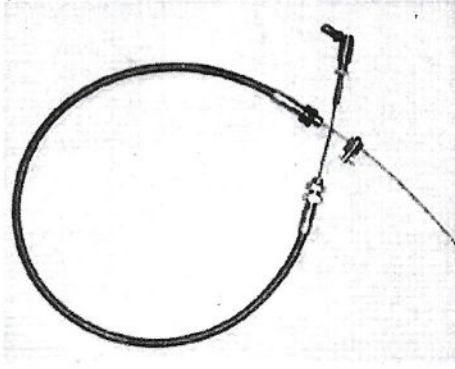


- A - Passenger Side Housing - Backing Plate To Housing Bracket
- B - Drivers Side Housing - Backing Plate To Housing Bracket
- C - Exposed Cable
- D - Mounting Bracket To End Of Adjusting Rod/Front Cable
- E - Front Cable Housing - Bracket To Bracket
- F - Mounting Bracket To Clevis Pin In Lever
- G - Mounting Bracket To End Of Adjusting Rod/Rear Cables

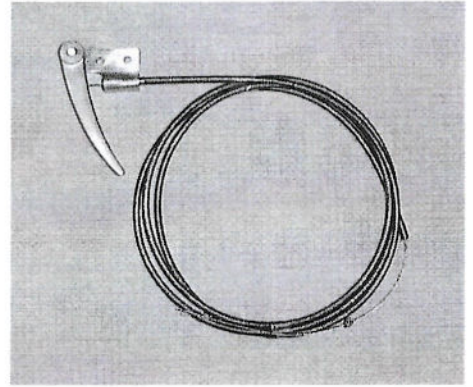
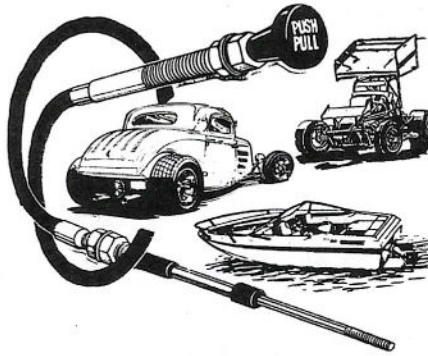
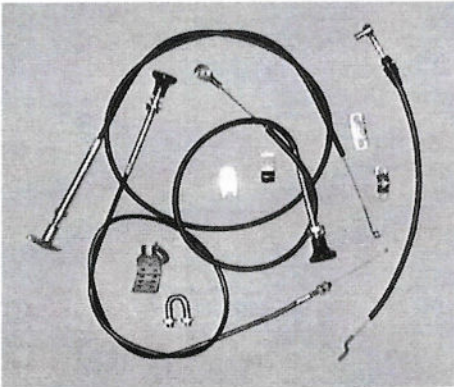
- A _____
- B _____
- C _____
- D _____
- E _____
- F _____
- G _____

USE FITTING ON PULL ONLY CABLE S

1. CHOOSE THE LAYOUT YOU NEED- CENTER OR SIDE PULL.
2. MEASURE A TO G , MARK MEASUREMENT IN SPACES.
3. PICK THE HOUSING END FITTING YOU NEED.
4. CHOOSE THE INTER CABLE FITTING.
5. FAX OR MAIL US THIS LAYOUT SHEET



CALIFORNIA PUSH-PULL, INC.



We are a custom cable house, and stock various control cable components. We are able to build any type, size or length cable to meet your requirements.

Our throttle and shift cables are highly flexible and of heavy duty construction for long life under rugged conditions. All end rods and support tubes are stainless steel and all components are swagged on for strength.

Our brake cable division uses only true OEM style flat wound lined housing. All components are swagged, not set screwed. Our brake cables are made to your specifications, we can build your cable from a drawing or old sample.

We have a line of specialty cables such as parachute, trim to length throttle and more.

We stock a full line of accessories, from adjustable clevises, quick release ball joints, rod ends, cable clamps and much more.

Give us a sample, drawing or print of the cable you need and we will supply you with that cable.

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