

SINCE. 1971

MILLER CARRIAGE CO.

SHIPSHEWANA, IN



PARTS CATALOG 2023



2023 Product Catalog

Pricing

Prices are subject to change without notice. Custom built items will be charged accordingly or will be quoted on application. All prices are listed for a single piece unless otherwise noted.

To Place an Order

Orders can be mailed, faxed or phoned in. Please be sure to include item number, plus sizes and specs to ensure prompt shipment. To order custom built items please include all accurate measurements, patterns & sketches.

Shipping

Most items shipped by UPS. Please allow 2 weeks for delivery. For custom orders allow 4 weeks.

VERY IMPORTANT: Inspect your package for damage. If the package is damaged, have the driver mark the delivery receipt but don't send it back. Check contents and if there are any missing or damaged parts, call the shipping company and us right away.

Terms

All orders must be paid before shipment unless other arrangements have been made.

Miller Carriage Co. was established in 1971. Since that time we have grown with the demand for buggy and carriage parts, and now stock an inventory for all your needs. It has been you, our faithful customers from our beginning that have made it possible for us to continue to serve the buggy and carriage industry. Our prices may not be the lowest, but we stand behind what we sell, and we plan on being around for many more years. If you are in the area, stop in to visit. We will be glad to show you our operation.

Hours

Monday - Friday

7:00 AM - 4:00 PM

Miller Carriage Co LLC 3035 N 850 W Shipshewana, IN 46565

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www.millercarriage.com

WE BELIEVE:

* That a business succeeds only as it continually endeavors to render better service. * That our business is to furnish merchandise to meet all requirements of the trade, at prices that will enable our customers to meet the competition successfully and to make satisfactory profits. * That the greatest asset a business can have is a reputation for fair dealing. * That strict adherence to these principles will assure the continued growth of our business through the maintenance of mutually profitable relationships with our many customers.

~ John E. Miller



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Tire Bolts



		w/nuts
1-A	3/16" x 1 3/4"	
1-B	3/16" x 2"	
1-C	3/16" x 2 1/4"	
1-D	3/16" x 2 1/2"	
1-E	1/4" x 3"	

Fifth Wheel Bolts



1-F	5/16" x 4"
1-G	3/8" x 4 1/2"

Step Bolts

1-H	1/4" x 2" - 1" dia. head
1-I	5/16" x 2 1/2" - 1 1/8" dia. head

Seat Bolt

1-J	1/4" x 14" carriage bolt
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Hex Nuts



2-A	3/16" hex nuts
2-B	1/4" hex nuts
2-C	5/16" hex nuts
2-D	3/8" hex nuts
2-E	7/16" hex nuts
2-F	1/2" hex nuts

Lock Nuts



2-H	1/4" lock nuts
2-I	5/16" lock nuts
2-J	3/8" lock nuts
2-K	7/16" lock nuts
2-L	1/2" lock nuts
2-M	5/8" lock nuts

Square Nuts



2-O	3/16" square nuts
2-P	1/4" square nuts
2-Q	5/16" square nuts
2-R	3/8" square nuts
2-S	7/16" square nuts
2-T	1/2" square nuts

Hex Bolts

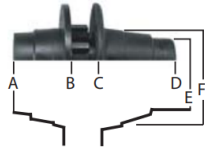


3-A	1/4" x 1" to 6" increment
3-B	5/16" x 1" to 5" 1/2" increment
3-C	3/8" x 1" to 6" 1/2" increment

Carriage Bolts



3-K	3/16" x 1" to 3" 1/2" increments
3-L	1/4" x 1" to 5" 1/2" increment
3-M	5/16" x 1" to 5" 1/2" increment
3-N	3/8" x 1" to 6" 1/2" increment
3-G	5/16" x 2 1/4" Hub bolts Grade 5
3-H	5/16" x 2 1/2" Hub bolts Grade 5



Sarven Hubs

Dimensions

The hubs are listed as No. 1, 2, 3 & 4

Following are the dimensions for the sarven hubs we have in stock.

Some of the older hubs may be larger or smaller, and we can supply these on request.

Centers	A-D	A	E	F	B-C
No. 1	7"	2 1/4"	2"	2 3/4"	1"
No. 2	7"	2 3/8"	2 1/8"	3"	1 1/8"
No. 3	7 1/4"	2 7/8"	2 1/2"	3 1/2"	1 1/4"
No.4	8"	3"	2 3/4"	3 7/8"	1 3/8"
Flanges	A	E	F	A-B	C-E
No. 1	2 1/4"	2"	3"	3"	4"
No. 2	2 1/2"	2 1/4"	3 1/8"	3"	4"
No. 3	2 7/8"	2 1/2"	3 1/2"	2 5/8"	4 1/4"
No. 4	3 1/8"	2 5/8"	3 7/8"	3 3/8"	4 1/2"



Sarven Hubs

5-A	No. 1 Sarven Hub Flange
5-B	No. 1 Sarven Hub Center
5-C	No. 2 Sarven Hub Flange
5-D	No. 2 Sarven Hub Center
5-E	No. 3 Sarven Hub Flange
5-F	No. 3 Sarven Hub Center
5-G	No. 4 Sarven Hub Flange
5-H	No. 4 Sarven Hub Center



Small Roller Bearing Bolt Hub

This is an all steel hub, slotted to fit spokes 1 1/8" - 1 3/8".

Comes with dust cap. Fits 1" & 1 1/8" axle.

5-I	#409 Small Roller Bearing Hub
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Large Roller Bearing Hub

Fits 1 1/4" & 1 1/2" axles.

Use spokes 1 3/8" thru 1 3/4"



5-J	Hub for 1 1/4" axle
5-K	Hub for 1 1/2" axle
5-L	Hub for 1 1/4" axle w/step cap
5-M	Hub for 1 1/2" axle w/step cap

Roller Bearing Hubs

5-N	#101 Sm Roller Bearing Hub. This hub is the same as 5-J, but has a larger dust cap to make it easier to install cotter pins.
5-O	#101 Small Roller Bearing Hub - Stainless Steel
5-P	#202 Large Roller Bearing Hub - Stainless Steel
	#3 & #4 Hub Also available in stainless steel
5-Q	#101 Small Roller Bearing Hub- Same as 5-N but machined for fiberglass wheel



	A	B
5-I	5"	7 3/4"
5-J	6 1/2"	9 1/2"



	6-A	6-B	6-C&D	6-E	6-F	6-G
6-A	#409 Small roller bearing hub machined for fiberglass wheels					
6-B	#101 Small roller bearing flush hub					
6-C	#202 Large roller bearing flush hub - 1 1/4 axle					
6-D	#202 Large roller bearing flush hub - 1 1/2 axle					
6-E	Mini hub - 12 spoke - all steel					
6-F	Aluminum ornamental hub - for goat wagons etc.					
6-G	Aluminum ornamental flange - matches small bolt hub					

We can supply wood hubs for offset spokes and large wagon wheels. Send us dimensions, or send us your old hub for exact duplicates, or send the steel bands. Price is approximately \$11.00 per diameter inch.

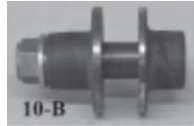
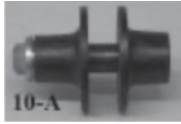


Stainless Steel Hubs

State axle size

6-H	Small Flush Hub-Stainless steel
6-J	Large Flush Hub-Stainless steel

Graber Hubs



	A	B
10-A	5"	7"
10-B	5 3/4"	7 1/2"

10-A	Small roller bearing hub
10-B	Large roller bearing hub

Hubs are supplied with screw on dust caps.
 This hub can be used to replace worn out Sarven hubs or installed on new wheels. You can cut the old hub off flush with the spokes, and install this hub. Can also be used on fiberglass wheels. These hubs are made of heavy cast steel.
 Hub 10-A uses spoke sizes 1 1/8" to 1 3/8"
 Hub 10-B uses spoke sizes 1 1/4" to 1 1/2"

Roller Bearing Axles



Square Roller Bearing Axles
 These axles are made of high quality steel and expertly machined, and will never wear out if properly installed and used. Standard length for all axles is 64". Wide track length is 68". Other lengths available by special order. We stock axles straight with the ends toed & gauged. Drop or arch axles are available on request. Please specify how much.

11-A	1" axle w/ nuts only
11-B	1" axles w/ bearings & seals set of 2
11-C	1" axles, bearings & boxings set of 2
11-D	1 1/8" axle & nuts only
11-E	1 1/8" w/ bearings & seals set of 2
11-F	1 1/8" axles, bearings & boxings set of 2

The above axles are for the Roller bearing bolt hub No. 5-I & 12-A. We always have these in stock for immediate shipment.

Roller Bearing Boxings



The roller bearing boxing can be installed in any sarven hub wheel. If you want to switch your old buggy from plain axles to roller bearings, you can install this boxing in your wheels, and replace your axles.

Boxing for 1" & 1 1/8" axles	
12-A	Roller bearing boxing

This boxing can be used with axles 11-A & 11-D

Boxing for 1 1/4" & 1 1/2" axles	
12-B	Roller bearing boxing

To be used with axles 12-C & 12-F

Roller Bearing Axles

12-C	1 1/4" axle w/ nuts only
12-D	1 1/4" axles w/ bearings & seals set of 2
12-E	1 1/4" axles, bearings & boxings set of 2
12-F	1 1/2" axle w/nuts only
12-G	1 1/2" axles w/ bearings & seals set of 2
12-H	1 1/2" axles, bearings & boxings set of 2

Axles 12-C & 12-F can be used with hub 5-J & 5-K.

Roller Bearing Axles for Graber Hubs

Axles for hubs 10-A & 10-B

13-A	Axle only
13-B	Axles & bearings set of 2
13-C	Axles, bearings & hubs set of 2

Bearings for the above axles are A6075, 07100 & seal 17-B.

Axles for hub 10-B (Graber No. 2)

13-D	Axle only
13-E	Axles & bearings set of 2
13-F	Axles, bearings & hubs set of 2

Bearings used for the above axles are No.1280 & No.15580 & seal No.17-C.



2" Square Roller Bearing Axle

13-G	Axles & boxings
13-H	Axles, bearings & boxings
13-I	Boxings only for above

We can supply axles in lengths up to 75".

Bearings for above axles

13-K	Inside - 4T369A
13-L	Outside - LM29749
13-J	2" grease seal

Plain Axles



Old time tapered spindle axles with double collar.

Available in 1", 1 1/8" & 1 1/4".

Standard length 64". Toed & gauged.

14-A	1" axle set of 2 w/ boxings
14-B	1 1/8" axle set of 2 w/ boxings
14-C	1 1/4" axle set of 2 w/ boxings

Boxings

14-K	1" boxing
14-D	1 1/8" boxing
14-E	1 1/4" boxing

Nuts

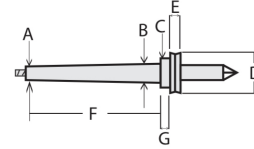
14-F	Nuts for 1" or 1 1/8"
14-G	Nuts for 1 1/4"

Washers

14-H	Endless neoprene washers
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Old style Boxing Dimensions

Following are the dimensions for our plain spindle old style axles. We often get requests for boxings to fit an old axle. Below are the measurements for our axles. If they do not match with your old axle, we suggest you get new stubs or new axles as the cost of special boxing's cost about as much as the new axles or stubs, and it may take up to 60 days to have new ones made to it.



Axle	A	B	C	D	E	F	G
1"	27/32"	15/16"	1"	1 1/2"	5/8"	5 1/8"	1/2"
1 1/8"	7/8"	1"	1 1/8"	1 11/16"	5/8"	5 1/8"	1/2"
1 1/4"	1 1/16"	1 3/16"	1 3/8"	1 7/8"	5/8"	6 3/16"	3/8"

Stubs Axles

If you want to keep your original axles, but the spindles are wore out, you can cut them off and weld on new stubs. Axle stubs have approximately 4" square parts of axle from machined portion to weld on the old axle.

Roller Bearing Axle Stubs

16-A	1" axle only
16-B	1" w/ bearings
16-C	1 1/8" axle only
16-D	1 1/8" w/ bearings
16-E	1 1/4" axle only
16-F	1 1/4" w/ bearings
16-G	1 1/2" axle only
16-H	1 1/2" w/ bearings
16-I	2" axle only
16-J	2" w/ bearings

Plain Axle Stubs

16-K	1" with boxings
16-L	1 1/8" with boxings
16-M	1 1/4" with boxings



Grease Seals

17-A	Seal for 1" axle
17-B	Seal for 1 1/8" axle
17-C	Seal for 10-B hub
17-D	Seal for 1 1/4" axle
17-E	Seal for 1 1/2" axle
17-F	Seal for Schwartz axle
17-G	Seal for mini axle

Bearings & Seals in Sets (4 wheels)

17-H	For 1" axle
17-I	For 1 1/8" axle
17-J	For 1 1/4" axle
17-K	For 1 1/2" axle
17-L	For 2" axle



Bearings - Seals

Timken Taper Bearings	
17-M	A6075 - For 1" & 1 1/8" axle
17-N	07093 - For 1" axle
17-O	07100 - For 1 1/8" axle
17-P	LM67048 - For 1 1/4" axle
17-Q	LM29748 - For 1 1/2" axle
17-R	1280 - For 10-B hub
17-S	15580 - For 10-B hub
17-T	A4059 - For Schwartz axle



Bearing Races

18-A	A6157 - For A6075 bearing
18-B	07196 - For 07093 & 07100 bearings
18-C	LM67010 - For LM67048 bearing
18-D	LM29710 - For LM29748 bearing
18-E	420 - For 15580 bearing
18-F	15520 - For 1280 bearing
18-G	A4138 - For A4059 bearing

Dust Caps for Hubs & Boxings



18-I	Unpolished brass cap for 5-I hub- Small Pa. hub
18-H	Cap for 5-I hub-Small Pa.
18-J	Cap for 12-A boxing
18-K	Brass cap for 12-A boxing
18-L	Brass cap for 12-B boxing
18-M	Unpolished brass cap for 5-J hub
18-N	Cap for 10-A hub - Graber no. 1 hub
18-O	Cap for 10-B hub - Graber no. 2 hub
18-P	Polished chrome cap for 5-I hub
18-Q	Polished brass cap for 5-I hub
18-R	Polished chrome cap for 5-J hub
18-S	Polished brass cap for 5-J hub
18-T	Polished chrome cap for 5-L hub
18-U	Polished brass cap for 5-L hub

Below are heavy (easy pin) dust caps.

18-V	Steel cap for 5-N hub
18-W	Polished Chrome cap for 5-N hub
18-X	Polished Brass cap for 5-N hub



Graber Push-On Dust Caps

19-A	For small hub
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Witmer Boxing Dust Cap Female

19-C	Dust cap for Witmer boxing
19-D	Schwartz screw on dust cap
19-E	Schwartz push on dust cap

Castellated Nuts for Roller Bearing Axles



19-F	Nuts for 9/16" axle
19-G	Nuts for 5/8" axle
19-H	Nuts for 3/4" axle
19-I	Cotter Pins
19-J	Steel Axle Washers for RB axles
19-K	Steel Axle Washers-oversized hole
19-L	Steel Axle Washers for 1 1/4" & 1 1/2" axles
19-M	Steel Axle Washers for 2" axles

Leather Axle Washers



To take play out of worn axles.

20-N	Leather axle washers
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Sarven Spokes



20-A	1"
20-B	1 1/16"
20-C	1 1/8"
20-E	1 1/4"
20-G	1 3/8"
20-H	1 1/2"
20-I	1 5/8"
20-J	1 3/4"
20-K	2"
20-L	2 1/4"
20-M	2 1/2"

Bolt Hub spokes sizes are:

20-O	1 1/8"
20-P	1 1/4"
20-Q	1 3/8"
20-R	1 1/2"

Wooden Hub & Wagon Spokes



21-A	1"
21-B	1 1/16"
21-C	1 1/8"
21-D	1 1/4"
21-E	1 3/8"
21-F	1 1/2"
21-G	1 5/8"
21-H	1 3/4"
21-I	1 7/8"
21-J	2"
21-K	2 1/4"
21-L	2 3/8"
21-M	2 1/2"

Hickory Spoke Wedges



Wedges 1 1/4" long	
21-S	3/8" spoke wedges
21-T	1/2" spoke wedges



Bent Rims or Felloes

Hickory
 Prices are per bundle of 4. Diameter of Felloes are from 24" thru 52" in 2" increments. Felloes up to 1 1/2" are beveled, 2" and over are square. Felloes 2" and over may be made out of ash or white oak. Any size can be shipped UPS.



22-A	7/8 x 1 1/4	24 to 44
22-B	1 x 1 1/4	24 to 44
22-C	1 x 1 3/8	24 to 44
22-D	1 1/8 x 1 3/8	24 to 44
22-E	1 1/4 x 1 3/8	24 to 44
22-F	1 1/2 x 1 1/2	24 to 44
22-G	2 x 2	24 to 44
22-H	3 x 1 3/4	24 to 44
22-AA	7/8 x 1 1/4	46 to 48
22-BA	1 x 1 1/4	46 to 48
22-CA	1 x 1 3/8	46 to 48
22-DA	1 1/8 x 1 3/8	46 to 48
22-EA	1 1/4 x 1 3/8	46 to 48
22-FA	1 1/2 x 1 1/2	46 to 48
22-GA	2 x 2	46 to 48
22-HA	3 x 1 3/4	46 to 48
22-AB	7/8 x 1 1/4	50 to 52
22-BB	1 x 1 1/4	50 to 52
22-CB	1 x 1 3/8	50 to 52
22-DB	1 1/8 x 1 3/8	50 to 52
22-EB	1 1/4 x 1 3/8	50 to 52
22-FB	1 1/2 x 1 1/2	50 to 52
22-GB	2 x 2	50 to 52
22-HB	3 x 1 3/4	50 to 52

We will drill the spoke holes and dress felloes on request. For special size felloes add up to 6 weeks for delivery. Prices will be charged accordingly. When ordering felloes give width size first, then depth.

Wheels

We stock wheels listed from 24" through 44" in 2" increments, less tires for immediate shipment. Wheels with tires allow two weeks for delivery. Wheels will be shipped truck freight, unless other arrangements are made. We can ship UPS up to 34" on small orders. We can custom build wheels to your specifications in other combinations of spoke & rim sizes. Wheels are priced each. Please state diameter when ordering.

Roller Bearing Bolt Hub Wheels



Fit the 1" or 1 1/8" Roller Bearing Axles

1 1/4" spoke, 1" x 1 3/8" rim	
23-A	Wheels less tire
23-B	w/ 3/8" flat steel tire
23-C	w/ channel only
23-D	w/1 1/8" H.R. steel tire
23-E	w/1" channel & RT rubber
23-F	w/1" channel & FT rubber
1 1/4" spoke, 1 1/8" x 1 3/8" rim	
23-G	Wheels less tire
23-H	w/3/8 x 1 1/8 flat steel
23-I	w/1 1/4" H.R. steel tire
23-J	w/1 1/4" channel & RT rubber
23-K	w/1 1/4" channel & FT rubber
23-L	w/channel only
1 1/4" spoke, 1 1/4" x 1 3/8" rim	
24-A	Wheels less tire
24-B	w/ 3/8 x 1 1/4 fl at steel
24-C	w/ 1 1/4" channel & RT rubber
24-D	w/ 1 1/4" channel & FT rubber

The wheels above are priced from 24" thru 44" Wheels over 44" add as follows per wheel. 46".....\$5.00 48".....\$10.00 50".....\$15.00 52".....\$20.00



Large Hub, Roller Bearing Wheel, 1½” Tire

Hub No. 5-J & 5-K

Please state axle size when ordering wheels, 1¼ or 1½ Spokes: 1¾” or 1½”, Specify .. Rims: 1½” x 1½”

24-E	Wheels less tires
24-F	w/ ¾” x 1½” fl at steel
24-G	w/ 1½” channel & R.T. rubber
24-H	w/ 1½” channel & F.T. rubber

Large Hub, Roller Bearing Wheel, 2” Tire

Hub No. 5-J & 5-K

Please state axle size when ordering wheels, 1¼ or 1½ Spokes: 1¾” .. Rims: 2” x 2”

24-I	Wheels less tires
24-J	w/ ¾” x 2” flat steel
24-K	w/ 2” channel & F.T. rubber

These wheels are not a stock item. Built by special order only. For wheels over 44” add:

46”.....\$5.00 48”.....\$10.00 50”.....\$15.00 52”.....\$20.00

Sarven Hub Wheels

Steel Flanges
w/Wooden Center Core



No. 1 Sarven Hub

Spokes: 1”

25-A	Wheels less tires
25-B	w/5/16” x 1” flat steel
25-C	w/1” half round steel
25-D	w/1” channel & R.T. rubber
25-E	w/1” channel & F.T. rubber

No. 2 Sarven Hub

Spokes: 1½” .. Rims: 1” x 1¾” Hub No. 5-C

25-F	Wheels less tires
25-G	w/¾” x 1” flat steel tire
25-H	w/1” half round steel
25-I	w/1½” half round steel
25-J	w/1” channel & R.T. rubber
25-K	w/1” channel & F.T. rubber

No. 3 Sarven Hub

Spokes: 1¼” .. Rims: 1½” x 1¾” Hub No. 5-E

25-L	Wheels less tires
25-M	w/¾” x 1½” flat steel
25-N	w/1½” half round steel
25-O	w/1¼” channel & R.T. rubber
25-P	w/1¼” channel & F.T. rubber

Rivets in Rims.....\$4.00 per wheel

Boxings installed in hubs.....\$12.00 per wheel

No. 4 Sarven Hub

26-A	Wheels less tires
26-B	w/¾” x 1½” fl at steel
26-C	w/1½” channel & R.T. rubber
26-D	w/1½” channel & F.T. rubber

Spider Wheels

The spoke spiders are hubs with the spokes mounted in the hubs. The spokes are not tenoned, so you can easily cut them to the desired diameter to make a special wheel.



26-E	No. 1 sarven hub, 1” spoke
26-F	No. 2 sarven hub, 1½” spoke
26-G	No. 3 sarven hub, 1¼” spoke
26-H	No. 4 sarven hub, 1¾” spoke
26-I	No. 4 sarven hub, 1½” spoke
26-J	Small R.B. hub, 1½” spoke
26-K	Small R.B. hub, 1¼” spoke
26-L	Large R.B. hub, 1¾” spoke
26-M	Small R.B. flush hub, 1¼” spoke
26-N	Large R.B. flush hub, 1½” spoke

Riveted Felloes

We will put rivets in the rims on each side of the spokes to prevent the rim from splitting.

Please specify when ordering wheels.

Rivets in rims, add to price of wheels



Boxings Installed in Sarven Hubs

Sarven wheels need to have boxings put in the hubs to fit your axles.

Send us your old boxings out of your old wheels and we will install them in your new wheels, or we will install new boxings to fit your axles.

To install boxings add to cost of wheels

Fiberglass Wheels

These wheels are more durable than wooden wheels. Sizes available are: 34", 36", 38", 40", & 42" Prices are per set of 4, but can be ordered individually.

27-A	Wheels bare
27-B	Wheels w/hubs only
27-C	Wheels w/1" Flat steel tire
27-D	Wheels w/1 1/8" Half round steel tire
27-E	Wheels w/1" RT Rubber
27-F	Wheels w/1" FT Rubber
27-G	Wheels w/1 1/4" RT Rubber
27-H	Wheels w/1 1/4" FT Rubber
27-I	Wheels w/1" Channel only
27-J	Wheels w/1 1/4" Channel only
27-K	Wheels w/belting & 1 1/8" half round steel tire

Wheel Sizes Not Listed

We will custom make wheels in other combinations of spoke Round Head Hub Rivets and rim sizes. Prices on request.

Rebuild Old Wheels

We will respoke your old hubs and build new wheels to your specifications. Prices on request.

If it is a standard size wheel, most times it is cheaper to buy a new wheel.

Ornamental Wheels

We build these out of seconds material. We put on 1/8" steel tire. For decoration purposes only.

27-O	Ornamental Wheels
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We also custom build wood hub wheels.

Décor Wheels

27-P	For goat wagon, small metal hub, 28" to 12"
27-Q	For goat wagon, small wood hub, 16", 14" & 12"

Regular Felloe Plate

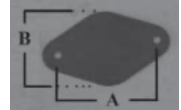
A=2 5/8" B=1 1/2"



28-A	Regular felloe plate
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Large Felloe Plate

A=3 1/2" B=3"



28-B	Large Felloe Plate
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Felloe Plate w/ Side Lip

A=2 1/2" B=2 1/2"



28-C	Felloe plate w/side lip
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Wheelwright Tools



28-F	Tenon Cutter, adjustable - 1/2"-1 1/2"
28-G	Spare blade
28-H	2" Pointer, for use with hand brace
28-I	Extra blade for 2"
28-J	4" Pointer, for use on a drill press
28-K	Extra blade for 4"

Wheel Traveler

Easy to read numbers. Friction set point. Will not rust.



28-L	Wheel Traveler
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Rivets

Truss Head Rivets (Rim Rivets), 1/8" Rivet has 1/4" head, 3/16" Rivet has 7/16" head

29-A	1/8" x 1 1/4" rim rivets w/burrs
	1/8" x 1 1/4" rim rivets w/burrs - 10 lbs.
29-B	1/8" x 1 3/8"
29-C	1/8" x 1 1/2"
29-D	3/16" x 1 1/2"
29-E	Burrs only for 1/8" rivets



Round Head Hub Rivet

29-F	3/16" x 2" hub rivets
29-G	1/4" x 2"
29-H	1/4" x 2 1/2"
29-I	5/16" x 2 1/2"
29-J	3/8" x 3"

Washers

29-K	3/16" tire bolt washers
	3/16" tire bolt washers - 10 lbs.
29-L	1/4" tire bolt washers
29-M	Fender washers, 3/8" hole, 1 1/2" diameter
29-N	Fender washers, 3/16" hole, 1" diameter
29-O	Flat washers, 1/4"
29-P	Flat washers, 5/16"
29-Q	Flat washers, 3/8"

Fifth Wheels

New improved short turn fifth wheel.

This fifth wheel has backer plates to put bolts through the head block and axle cap to keep from sliding. The tee plate that mounts underneath the axle is all one piece and bent ready to mount.

The v plate underneath the reaches can be used w/ 1 1/4" reaches.

The bolts mount the spring are a standard hex head bolt, 3/8" diameter.



30-A	Fifth Wheel Double Reach
30-B	Fifth Wheel Single Reach
Parts for 30-A	
30-AA	Fifth Wheel part STU
30-AB	Fifth Wheel part STUTS (D)
30-AC	Fifth Wheel part V plate
30-AD	Fifth Wheel part Tee plate
30-D	Fifth Wheel Stop

Malleable Iron 12"



31-B	Old style double reach fifth wheel
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Single Reach



31-C	Old style single reach fifth wheel
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Anderson Fifth Wheel



32-A	Anderson fifth wheel
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Trace Bolt

32-B	Trace bolt
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Reach and Braces

We will custom build reaches to your specifications, and will charge accordingly, or will quote prices on application. Here are some sizes that we stock.



33-A	Reaches & braces, 58" single buggy w/1 1/4 angle iron
33-B	Reaches & braces, 58" single buggy w/1 1/4 angle iron w/ welded heavy duty braces
33-C	Single buggy reaches less braces
33-D	Reaches & braces, 78" surrey buggy w/1 1/4 angle iron
33-E	Reaches & braces, 78" surrey buggy w/1 1/4 angle iron w/ welded heavy duty braces
33-F	Surrey reaches less braces
33-G	Reaches & braces, 68" queen buggy w/1 1/4 angle iron
33-H	Reaches & braces, 68" queen buggy w/1 1/4 angle iron w/ welded heavy duty braces
33-I	Queen buggy reaches less braces
33-J	Reach braces
33-K	Reach Brace heavy duty welded
33-L	Reach wood, 1 1/8 x 1 1/8 58
33-M	Reach wood, 1 1/8 x 1 1/8 78
33-N	Reach wood, 1 1/8 x 1 1/8 68
33-O	Angle iron, 1 1/4 x 1 1/4 x 1/8 x 58
33-P	Angle iron, 1 1/4 x 1 1/4 x 1/8 x 78
33-Q	Angle iron, 1 1/4 x 1 1/4 x 1/8 x 68
33-R	Reach plate for 2 axle clips



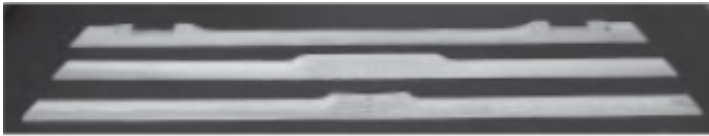
Fifth Wheel Head Block



The head blocks are made of Hickory. 17" long

34-A	1¼ head block
34-B	1½ head block

Axle Caps or Beds



All standard axle caps are 48" long, made to fit 1" or 1½" axles. We will make axle caps to your specifications. Some axles have an arch or a drop, or may be wide track. Our wide track axle caps are 52" long. Axle cap is for two side springs in rear & notched out for the cast spring blocks.

34-C	Front axle cap
34-D	Rear axle cap
34-E	Rear 2 spring axle cap

Following are axle caps other than standard.

35-A	Arch or drop cap, front
35-B	Arch or drop cap, rear
35-C	Wide track axle cap, front
35-D	Wide track axle cap, rear

Buggy Hangers

Our single seat buggy hangers are made of ¾" round stock. Mounting plates are 5/16" x 1¼".



Our surrey & queen hangers are made of 7/8" round stock. Mounting plates are 5/16" x 1¼".

Please specify width & height when ordering. We prefer the outside width.

35-E	Single Hanger ¾" stock
35-F	Surrey Hanger 7/8"
35-G	Queen Hanger 7/8"

Body Loops

Malleable steel body loops 18" long. We can bend them to your specifications.



Please specify height & degree of angle. No holes will be drilled unless requested.

36-A	Body loops, straight
36-B	Body loops, bent

Flat Steel Body Loops



5/8" x 1¼"

36-C	Flat body loops, straight
36-D	Flat body loops, bent

Bearing Grease



37-A	1552 Grease for slow speed bearings
37-B	All purpose grease
37-C	Bearing-Grease packer

Snaps

Holdback replacement snaps and other snaps

37-F	HB trigger snap 1" stainless
37-G	HB #200 snap (also line snaps) 1" stainless
37-H	#200 snaps ¾" stainless
37-I	4" snap open end hook zinc
37-J	5" snap open end hook zinc
37-K	Flat swivel snap ¾"

Holdback Straps



38-A	Holdback strap-Nylon w/trigger snaps
38-B	Holdback strap-Nylon w/reg. snaps
38-C	Holdback strap-Bio w/trigger snaps
38-D	Holdback strap-Bio w/reg. snaps
38-E	Holdback strap-Nylon Economy w/trigger snaps
38-F	Holdback strap-Leather w/trigger snaps
38-G	Holdback strap-Bio ¾" wide - Pony
38-H	Shafts safety straps



Lumber per B.F.

38-U	Popular Lumber - 4/4 rough
38-UP	Popular Lumber - 4/4 planed
38-V	Popular Lumber - 6/4 rough
38-VP	Popular Lumber - 6/4 planed
38-W	Ash Lumber - 4/4 rough
38-WP	Ash Lumber - 4/4 planed
38-X	Ash Lumber - 5/4 rough
38-XP	Ash Lumber - 5/4 planed
38-Y	Ash Lumber - 6/4 rough
38-YP	Ash Lumber - 6/4 planed
38-Z	Ash Lumber - 8/4 rough
38-ZP	Ash Lumber - 8/4 planed

Axle Clips



	Length of Flat	Overall Length
39-A	3"	6 1/4"
39-B	3 1/2"	6 3/4"
39-C	4"	7 1/4"
39-D	4 1/2"	7 3/4"
39-E	5"	8 1/4"
39-F	5 1/2"	8 3/4"
39-G	6"	9 1/4"
39-H	7"	10"
39-I	3 1/2" special perch clip	10 1/2"
39-J	4 1/2" special perch clip	8 1/2"

Axle Clip Bar



39-K	1" between holes
39-L	1 1/4" between holes
39-M	1 1/8" between holes
39-N	1 1/2" between holes

Finished Shaft Coupler



Shaft couplers have 3/8" bolt for 1" shaft eye

40-A	Shaft coupler
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Hoosier Shaft Coupler



Attaches to axle with two axle clips, axle clips not included.

40-B	For 1" or 1 1/8" axles
40-C	Only 2 holes drilled to be used for larger axles
40-D	Belting shaft coupler
40-E	Replacement belting only

Shaft Coupler



41-A	Recessed for 1" or 1 1/8" axle. No holes drilled, no bolts included. Attaches to axle w/2 axle clips.
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Anti Rattler



41-B	Anti Rattler for above coupler
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Clip Saddle

Recessed on each end. Mounts in the center of springs to keep the clips from sliding. Size: 1/8" x 1" x 5"

41-C	Aluminum Clip Saddle
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Half Round Spring Clips



Made of 1/2" half round steel. Some of these are stock items.

42-A	Custom made spring clip
42-B	1 1/4 x 4 spring clip
42-C	1 1/4 x 4 1/2 spring clip
42-D	1 1/2 x 4 3/8 spring clip
42-E	1 1/4 x 4 7/8 spring clip
42-F	1 1/2 x 4 3/4 spring clip
42-G	1 1/4 x 2 spring clip
42-H	1 1/2 x 2 spring clip
42-I	1 1/4 x 3 spring clip
42-J	1 1/4 x 3 spring clip



Iron Spring Blocks



Use with 1", 1 1/8" & 1 1/4" axles.

Mounts on the axle with 2 bolts and a clip bar. Springs can be mounted with bolts & clip bars, or with axle clips.

42-K	1" axle, 1 1/2 spring
42-L	1 1/8 axle, 1 1/2 spring
42-M	1 1/4 axle, 1 1/2 spring
42-N	1" axle, 1 1/4 spring
42-O	1 1/8 axle, 1 1/4 spring

Standard Spring Bar

This is our standard spring bar on our surrey, when using full elliptic springs in the rear on two sides. Length is 38 1/2" long, 1 1/4" wide, 2" high with 5/16" x 1 1/4" steel on the bottom. Clip saddles are welded on each end. Holes drilled for body loops are 24" center. Spring center is 34" We will custom make these to your specifications.

43-A	Spring bar for 2 springs
43-D	Spring bar with body loops

Fancy End Spring Bars

Made from Hickory
Available from 24" thru 34" in 2" increments. 1 1/4 or 1 1/2 widths
When ordering give measurement indicated above.

43-B	1 1/4" Spring bars
43-C	1 1/2" Spring bars

Full Elliptic Springs



Cast steel eyes, oil tempered & primed

44-A	1 1/4 x 30, 4 leaf
44-AA	1 1/4 x 30, 3 leaf
44-AB	1 1/4 x 26, 3 leaf
44-B	1 1/4 x 36, 4 leaf
44-BA	1 1/4 x 33, 4 leaf
44-C	1 1/4 x 36, 5 leaf
44-CA	1 1/4 x 33, 5 leaf
44-D	1 1/2 x 30, 4 leaf
44-E	1 1/2 x 36, 4 leaf
44-F	1 1/2 x 36, 5 leaf
44-G	1 1/2 x 36, 6 leaf
44-GA	1 1/2 x 36, 8 leaf
44-H	2 x 36, 6 leaf
44-I	2 x 36, 8 leaf

Full Scroll Spring



44-J	1 3/4 X 40, 4 leaf full scroll
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We can have other springs made to your specifications.

Three-Way Platform Springs



45-A	1 1/4", 4 leaf
45-B	1 1/2", 4 leaf

Four-Way Platform Springs



45-C	1 1/4", 4 leaf
45-D	1 1/2", 4 leaf



Fiberglass Springs

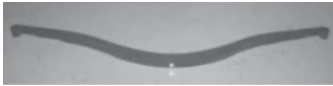
45-L	30", Medium
45-M	36", Medium
45-N	36", Heavy



Wagon Seat Springs

45-E	1¼ x 24, 2 leaf
45-F	1½ x 24, 2 leaf
45-G	1¼ x 19 Ornamental Seat Spring

Double Sweep Half Elliptic Cart Springs



46-A	1¼ x 34, 4 leaf, 4½ high, 1¼ x 37
46-B	1¼ x 37, 4 leaf, 6¾ high, 1¼ x 39
46-C	1¼ x 37, 4 leaf, 7" high, 1½ x 37
46-D	1¼ x 39, 4 leaf, 7" high, 1½ x 39

Other spring sizes & leaf combinations available on request.



Straight Helper Spring

Designed to fit between elliptic springs which are weak, or to help carry a heavy load. Attaches to 1¼" and 1½" springs with 2 set screws.

46-E	4" high
46-F	5" high
46-G	6" high

Cone Helper Spring

46-H	4" high
46-I	Cone spring without channel

Gears

We will make gears to your specifications.

The gears on the following pages are priced with our short turn fifth wheel, roller bearing axles, reaches with angle iron & iron body hangers. Gears are available in kits or assembled, with or without wheels, painted or unpainted. Other types of gears available are: old style fifth wheels, single or double reach, spring bars with body loops, plain axles, (not roller bearing) drop or arch axles.

Single Seat or Light Buggies

Gear kit includes:

1" roller bearing axles and bearings, short turn fifth wheel & bolts, front & rear axle caps, fifth wheel head block, two 1¼" x 36" 5 leaf springs, reaches & braces, 2-shaft couplers, 2 body hangers, axle clips, and all bolts needed to complete included.

53-A	Single gear kit
53-B	For gear assembly add extra

Gears with Sarven Hub Wheels

Call for prices.

Gears w/Roller Bearing Bolted Hub Wheels

53-H	With ¾ x 1 flat steel
53-I	With 1" half round steel
53-J	With 1⅝" half round steel
53-K	With 1" round top rubber
53-L	With 1" flat top rubber

Prices do not include gears assembled.

Queen Size Buggy Gears

Gear kit: Two spring

Includes 1⅝" axles and bearings, short turn fifth wheel & bolts, front & rear axle caps, fifth wheel head block, 2-1½" x 36" 4 leaf springs, reaches & braces, 2-shaft couplers, 2 body hangers, axle clips, and all bolts needed to complete included.

54-A	2 spring Queen gear kit
54-B	For gear assembly add extra

Queen Gears with Sarven Hub Wheels

Call for prices.



Queen Gear w/ Roller Bearing Bolted Hub Wheels

54-G	With 3/8 x 1 1/8 flat steel
54-H	With 1 1/4" half round steel
54-I	With 1 1/4" round top rubber
54-J	With 1 1/4" flat top rubber

Prices do not include gears assembled'

Three Spring Gear

Gear kit: 3 spring surrey or spring wagon

Includes 1 1/8" axles and bearings, short turn fifth wheel & bolts, front & rear axle caps, fifth wheel head block, 1-1 1/2" x 36" 5 leaf spring, 2-1 1/4 x 30, 4 leaf springs, reaches & braces, rear spring bar & body loops, front body hanger, 2 spring blocks, 2- shaft couplers, axle clips, and all bolts needed to complete included.

55-A	3 spring gear kit
55-B	For gear assembly add extra

Gears are also available with the full scroll springs in the rear. Add extra for full scroll springs

Surrey Gears with Sarven Hub Wheels

Call for prices.

Surrey Gear w/Roller Bearing Bolted Hub Wheels

56-A	With 3/8 x 1 1/8 flat steel
56-B	With 1 1/4" half round steel
56-C	With 1 1/4" round top rubber
56-D	With 1 1/4" flat top rubber

Prices are for 1 1/4" spokes, 1 1/8 felloes

Ordering

When ordering gears, please state width & length of body so we know what length to make the reaches, and the width of hangers.

Also on surrey bodies we need to know the degree of angle in the rear.

Any variations from our standard gears will be charged accordingly, or will quote a price on application.

Variations can be on heavier or lighter wheels, different spring sizes etc.

If you don't want the complete gear kit, we recommend you order the parts separately and we will bill you for each item. Our standard diameter wheels for gears are 38" front & 42" rear.

Elliptic Front & Platform Rear Gear

The platform spring gear used on spring wagons and various other vehicles, has a single reach fifth wheel & drop front axle. Our standard gear includes 1 1/8" straight roller bearing axles & bearings, short turn double reach fifth wheel & bolts, head block, front axle cap, reaches & braces, 1 1/2 x 36 - 5 leaf spring front, 3-way 1 1/4" - 4 leaf spring rear, spring bar & body loop(malleable) for front, spring bar & mounting plates for rear, 2 - spring blocks, shaft couplers, all axle clips, and bars & bolts. Any variations from our standard gear will be charged accordingly, or will be quoted on application.

Platform Gear Kit

57-A	1 1/4" 3 way spring
57-B	1 1/2" 3 way spring
57-C	1 1/4" 4 way spring
57-D	1 1/2" 4 way spring

If you want wheels with the gears, select the wheel size you want & style hub and add to the gear price.

Painted Wheels & Gears

We will paint wheels and gears on request. The wheels are hand sanded and 3 coats primer applied and sanded. Colors other than black, we will quote on application, as prices vary and it is more time consuming. We will also finish the wheels in natural. All iron is painted black. The wood is stained light or dark to suit your taste.

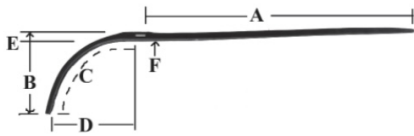
Short Heel Shafts for Pioneer Gear

59-A	Short Heel 1 side only
59-B	Short Heel 2 sides & crossbar
59-C	Short Heel bundle of 3 pair
59-D	Wood kit
59-E	Wood & Iron kit
59-F	Wood, Iron & Hardware kit
59-G	Wood, Iron, Hardware & Bolt kit
59-I	Assembled and painted
59-M	Short Heel GIG bent, 2 sides & crossbar
59-N	Short Heel GIG bent, assembled



Bent Heel Buggy Shafts

We aim to have most sizes and forms of shafts in stock. Assembled, painted & with leathers. Below is a chart to give you the sizes of shafts we stock. Refer to this chart when indicated.



A= Length from tip to cross bar D= Distance from heel to cross bar
 B= Height from bottom of heel to top of shaft E= Width at cross bar
 C= Length of heel to cross bar F= Thickness at cross bar

Light Buggy Shafts

1 3/8" x 1 1/8"	
60-A	Shaft side only
60-B	Two shaft sides & cross bar
60-C	Bundle of 6 pair & cross bars

A=75", B=18", C=22 1/2", E=1 1/8", F=1 1/8" See chart

Heavy Buggy Shafts

1 1/2" x 2"	
61-A	Shaft side only
61-B	Two shaft sides & cross bar
61-C	Bundle of 6 pair & cross bars

A=75", B=18", C=22 1/2", E=2", F=12" See chart

Shaft Repair Ends



A metal tube with wood insert for repairing shafts when the end is broken off. We have them in 24" & 30" lengths.

61-F	16" Shaft repair end
61-G	24" Shaft repair end
61-H	30" Shaft repair end

Ox Yoke Bows

Also available in other sizes or made with hickory.



61-I	1 1/4" Ox bows
61-J	1 1/2" Ox bows
61-K	2" Ox bows
61-L	1 3/4" Ox bows

Shaft Bars



Hickory shaft cross bar w/tenon Will make other sizes on request.

62-A	1 3/8 x 1 1/8 x 39 1/2
62-B	1 1/2 x 2 x 39 1/2
62-C	15/16 x 1 11/16 x 30
62-D	15/16 x 1 11/16 x 34 1/4
62-E	1 11/16 x 2 3/16 x 40
62-F	1 11/16 x 2 3/16 x 36 1/2
62-G	1 3/8 x 1 1/8 x 36 1/2

Flat End Single Trees

Hickory. These singletrees are a standard stock item. Will supply other sizes on request.

62-H	1 1/4 x 1 3/4 x 30
62-I	1 3/8 x 1 3/4 x 32
62-J	1 3/8 x 1 3/4 x 34
62-K	1 3/8 x 1 3/4 x 36
62-L	1 3/8 x 1 3/4 x 38
62-M	1 1/2 x 2 x 42
62-K	1 1/4 x 1 3/4 x 22
62-L	1 1/4 x 1 3/4 x 24
62-M	1 1/4 x 1 3/4 x 26
62-N	1 1/4 x 1 3/4 x 28
62-O	Painted singletrees 42"



Jerk Reducer

62-P	Jerk Reducer
62-Q	Replacement spring for Kuhns style
62-R	Spring replacement black tube
62-S	Jerk Reducer spring, new style



Singletrees with J Hooks

62-U	Stainless steel, primed 42"
62-V	Stainless steel, black 42"
62-W	Steel w/stainless caster, black 32"
62-X	Steel w/stainless caster, black 39"

Round End Single Trees

Round end singletree to be used w/hook ends, for shafts or poles.

63-A	1 ³ / ₈ x 1 ³ / ₄ x 34 for pole
63-B	1 ¹ / ₂ x 2 x 38 for shafts
63-C	1 ¹ / ₄ x 1 ³ / ₄ x 30

Hook End Single Trees

Round end singletree with hooks & ferrules.

63-D	1 ¹ / ₄ x 1 ³ / ₄ x 20
63-E	1 ¹ / ₄ x 1 ³ / ₄ x 22
63-F	1 ¹ / ₄ x 1 ³ / ₄ x 24
63-G	1 ¹ / ₄ x 1 ³ / ₄ x 26
63-H	1 ³ / ₈ x 1 ³ / ₄ x 30
63-I	1 ³ / ₈ x 1 ³ / ₄ x 34
63-J	1 ³ / ₈ x 1 ³ / ₄ x 36
63-K	1 ³ / ₈ x 1 ³ / ₄ x 38
63-L	1 ³ / ₈ x 1 ³ / ₄ x 40

Premium End SingleTrees

Round end singletree for premium brass hooks.

63-O	1 ¹ / ₂ x 2 x 22 for 1" premium ends
63-P	1 ¹ / ₂ x 2 x 26 for 1" premium end
63-Q	1 ¹ / ₂ x 2 x 30 for 1 ¹ / ₄ " premium end
63-R	1 ¹ / ₂ x 2 x 32 for 1 ¹ / ₄ " premium end
63-S	1 ¹ / ₂ x 2 x 34 for 1 ¹ / ₄ " premium end
63-T	1 ¹ / ₂ x 2 x 36 for 1 ¹ / ₄ " premium end
63-U	1 ¹ / ₂ x 2 x 38 for 1 ¹ / ₄ " premium end

Premium End Singletrees

Round end singletree with brass premium hooks installed.

63-OA	1 ¹ / ₂ x 2 x 22" w/1" hooks
63-PA	1 ¹ / ₂ x 2 x 26" w/1" hooks
63-QA	1 ¹ / ₂ x 2 x 30" w/1 ¹ / ₄ " hooks
63-RA	1 ¹ / ₂ x 2 x 32" w/1 ¹ / ₄ " hooks
63-SA	1 ¹ / ₂ x 2 x 34" w/1 ¹ / ₄ " hooks
63-TA	1 ¹ / ₂ x 2 x 36" w/1 ¹ / ₄ " hooks
63-UA	1 ¹ / ₂ x 2 x 38" w/1 ¹ / ₄ " hooks

Trace Holders



6" Spring trace holders

64-A	Unpainted each
64-B	Painted, w/screws, pair

Lite Brass Flip Trace Holders



64-C	Lite brass trace holders, pair
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Lite Trace Holder w/Spring Steel Hook



64-D	Trace holder w/steel spring hook, pair
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Heavy Brass Trace Holder



65-A	Heavy brass trace holder, pair
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Hooks & Ferrules



65-B	Brass hooks, pair
65-C	7/8" Ferrules, pair
65-D	1" Ferrules, pair
65-E	1 set = 2 hooks & 2 ferrules



Excelsior Trace Attachments



65-F	Excelsior trace attachment, ea.
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Trace Holder with Hooks

65-G	Black stainless
65-H	Stainless

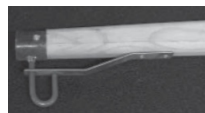
Premium Whiffletree Hooks



Solid brass hooks to be used w/chain link tugs. The ends are spring loaded to keep the tugs from coming unhooked. Not recommended for heavy wagons.

66-A	1" Premium hook, pair
66-B	1 1/4" Premium hook, pair

Trace Hook Snappers



Made of spring steel, 9 1/2" long. To be used with chain link traces, to keep them from coming unhooked.

66-C	Trace hook snappers, 2 pc. set
66-D	Trace snapper spring only
66-E	Trace snapper hook only

Singletree Casters



67-A	Flat Style Caster 1 3/4" x 4"
67-B	Singletree caster 2" x 5"
67-C	Singletree caster 1 5/8" x 3" stainless steel
67-D	Single tree caster w/ green nylon inserts

4" Singletree Yokes



67-E	Yoke, w/ holes drilled
67-F	Yoke undrilled

Doubletree Clevis & Wear Plate



67-G	Diamond wear plate, malleable casting
67-H	Doubletree clevis, malleable casting
67-I	Clevis - zinc
67-J	Wear plate - zinc
67-K	Clevis & wear plate - zinc

Hold Back Irons



68-A	Hold back irons - ea.
68-B	Hold back iron Michigan style
68-C	Hold back iron Michigan style stainless
68-D	Hold back irons brass

Tee Plates



Tee plates are used to make a T-head bolt. Takes carriage bolts.

68-F	1/4"
68-G	5/16"
68-H	3/8"



Shaft Tips



Measurements are inside dimensions.

Machined Steel	
69-A	7/8"
69-B	1"
69-C	1 1/8"
69-D	1 1/4"
Solid Polished Brass	
69-I	1 1/8"
69-J	1 1/4"
Solid Polished Stainless Steel	
69-K	7/8"
69-L	1"
69-M	1 1/8"
69-N	1 1/4"



Shaft Irons

Shaft irons are made of 1/4 x 1 mild steel with a shaft eye welded on the end. Overall length is 31 1/2". Available with or without the stiffener bars.

70-A	Shaft irons less stiffeners
70-B	Shaft irons with stiffeners
70-C	Stiffener only



Shaft Eyes

70-D	Shaft eyes, 1" wide w/3/8" hole w/ 3" flat steel
70-E	1" x 1" shaft eye only
70-F	Shaft eye w/green nylon insert w/3" flat steel
70-G	Nylon insert only
70-H	1" x 1" Shaft eye only w/green nylon insert
70-I	1" x 2 1/8" shaft eye only w/green nylon insert

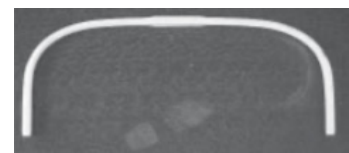
Shaft Irons for Fiberglass Shafts

70-L	Shaft iron for fiberglass shafts
70-M	Shaft iron for fiberglass shaft w/green nylon insert
70-O	Shaft iron for fiberglass shafts for belting couplers

We will also custom make shaft irons to your specifications. Price will be charged accordingly or will quote price on application.

Shaft Irons

70-P	Shaft irons for the pioneer shafts
70-Q	Shaft irons for green nylon inserts w/stiffeners
70-R	Shaft irons for green nylon inserts less stiffeners
70-S	Shaft irons for belting couplers w/stiffeners
70-T	Shaft irons for belting couplers less stiffeners
70-U	Shaft irons for Mini Pony w/stiffeners
70-V	Shaft irons for Mini Pony less stiffeners
70-W	Shaft irons for the straight heel wagon shafts



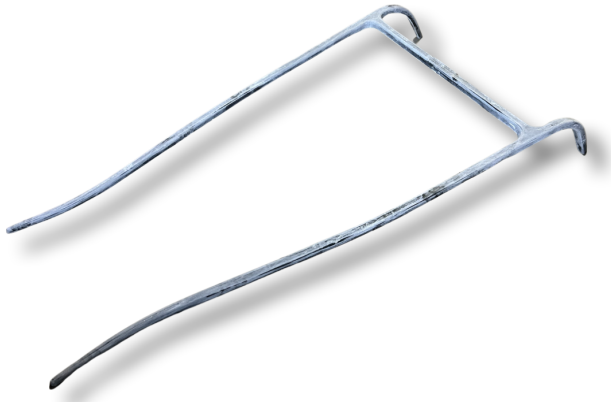
Circle Bar

38" wide This size circle bar fits only standard width shafts

71-A	Buggy shaft circle bar
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Fiberglass Shafts



71-B	Fiberglass shafts (bare)
71-C	Fiberglass singletree
71-D	Fiberglass shafts assembled w/wood singletree
71-E	Fiberglass shafts assembled w/ fiberglass singletree
71-EA	Fiberglass shafts assembled w/ steel singletree
71-F	Fiberglass shafts assembled & painted
71-G	Fiberglass shafts assembled & painted w/jerk reducer

Ironed Shafts



Our shafts are available in kits assembled and/or painted. Listed are the items included in the kits. If you want some items different as listed, we suggest you order each item separately.

Hardware & Iron Kit

2-7/8" steel tips, hold back loops, singletree center, singletree yoke, No. 64-B trace holders, singletree wear plate, irons & stiffener bars, 2-1/4" tee plates, 2-5/16" tee plates, 1-3/8" x 5/2" carriage bolt with lock nut.

Bolts

6-1/4" x 2" carriage, 6-5/16" x 2" carriage, 4-5/16" x 2 1/2" carriage, 6-1/4" x 3 1/2" carriage, 6-1/4" flat washers.

72-A	Shaft hardware kit
72-B	Shaft hardware kit w/bolts
	Light Buggy Shafts 1 3/8 x 1 7/8
72-C	Wood kit - 2-sides, crossbar, circle bar, & singletree
72-D	Wood, iron & hardware kit
72-E	Wood, hardware & bolt kit
72-F	Assembled shafts
72-G	Assembled & painted black
	Heavy Buggy Shafts 1 1/2 x 2
72-H	Wood kit - 2-sides, crossbar, circle bar, & singletree
72-HA	Wood & iron kit
72-I	Wood, iron & hardware kit
72-J	Wood, hardware & bolt kit
72-K	Assembled shafts
72-L	Assembled & painted black

Will also paint shafts in other colors, price on application. Pony shafts, draft horse buggy shafts & other shafts are also available in kits or assembled. See pages where these are listed. Buggy shafts can be shipped UPS at oversize 3.



Table of Pole & Splinter-Bar Measurements for Fixed Pole Carriages

Hands	16	15	14	13	12
Length of pole from splinter bar to pole head	9'2"	8'10"	8'3"	7'10"	7'3"
Splinter bar length	5'4"	5'2"	5'0"	4'10"	4'8"
Height of splinter bar	3'0"	2'10"	2'9"	2'6"	2'4"
Height of pole end	3'6"	3'3"	3'1"	2'1"	2'10"

Table of Shafts Lengths & Widths

Hands	16	15	14	13	12
Length of shaft from draft bar to tip	6'4"	6'	5'7"	5'2½"	4'10"
Height from ground under shafts at tugs	4'4"	4'1"	3'10"	3'7"	3'4"
Width between shafts at back band tugs	2'0"	1'10"	1'8"	1'6"	1'4"
Length from back tug to shaft tip	1'10"	1'8½"	1'7"	1'5½"	1'4"
Width inside shafts at futchells or cross bar	2'10"	2'8"	2'6"	2'4"	2'2"
Length from back tug stop to trace hook	4'4"	4'1"	3'10"	3'7"	3'4"
Distance of breeching staple from trace hook	2'5"	2'3½"	2'2"	2'0½"	1'11"
Distance of kicking strap staple from trace hook	1'1"	1'0"	0'11 ½"	0'11"	0'10"

Bent Heel Mini Pony Shafts

73-A	54" Mini pony shaft side only
73-B	2 sides & crossbar
73-C	Bundle of 3 pair & crossbars
73-D	48" Mini pony shaft side only
73-E	2 sides & crossbar
73-F	Bundle of 3 pair & crossbars

Mini Shaft Kits

73-G	Wood & hardware kit
73-H	Wood, hardware & bolt kit
73-I	Mini shafts assembled
73-J	Mini shaft assembled & painted

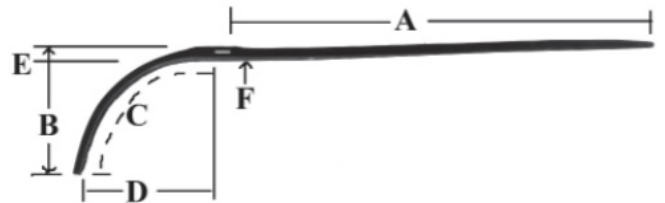
When ordering mini shaft kits, state size 54" or 48"

Crossbred Horse Shaft Kits 6" longer than standard

73-L	Side only 81"
73-M	2 sides & crossbar
73-N	Bundle 3 pr.
73-O	Wood Kit
73-P	Wood & Hardware Kit
73-Q	Assembled
73-R	Assembled & Painted

Bent Heel Pony Shafts

Below is a chart to give you the sizes of shafts we stock. Refer to this chart when indicated.



A= Length from tip to cross bar D= Distance from heel to cross bar
 B= Height from bottom of heel to top of shaft E= Width at cross bar
 C= Length of heel to cross bar F= Thickness at cross bar

Pony Shafts

74-A	60" Pony shaft side only
74-B	Two shaft sides & cross bar
74-C	Bundle of 3 pair & cross bars
74-D	65" Pony shaft side only
74-E	Two shaft sides & cross bar
74-F	Bundle of 3 pair & cross bars

A=60 & 65", B=18", C=22", D=11", E=1 11/16" F=1 5/16"



Pony Shaft Kits

74-G	Wood & hardware kit
74-H	Wood, hardware & bolt kit
74-I	Pony shafts assembled
74-J	Pony shafts assembled & painted

When ordering kits please state if you want 60" or 65" shafts. Pony shafts do not have a circle bar.

Bent Heel Draft Horse Shafts

Refer to the Pony shaft chart for measurements.

75-A	Draft horse shaft side only
75-B	Two shaft sides & cross bar
75-C	Bundle of 3 pair & cross bars

A=87", B=18", C=23", D=12½" E=23/16", F=1 11/16"

Draft Horse Buggy Shaft Kits

75-D	Wood kit
75-E	Wood & hardware kit
75-F	Wood, hardware & bolt kit
75-G	Draft horse shafts assembled
75-H	Draft horse shafts assembled & painted

Kit includes a flat end singletree, with other styles available.



Cart Circle Bar

75-J	Cart circle bar
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Double Bend Wagon Shafts



Regular Horse - 1½" x 2" A=75", B=21½", C=8"

76-A	One side only
76-B	Two sides & cross bar
76-C	Bundle of 6 pair with cross bars

Draft Horse - 23/16" x 111/16" A=87", B=21½", C=8"

76-D	One side only
76-E	Two sides & cross bar
76-F	Bundle of 3 pair with cross bars



Irons for Double Bend Shafts

The irons for the regular shafts are made of ¼" x 1" steel. The irons for the draft horse shafts are made of 5/16" x 1¼" steel.

76-G	Irons for regular shaft
76-H	Irons for draft horse shaft

Draft shafts can be shipped UPS - Oversize 3

Double Bend Pony Shafts

65" Pony

76-I	2 sides with cross bar
76-J	Bundle of 3 pair & cross bars

48" Mini pony

76-K	2 sides with cross bar
76-L	Bundle of 3 pair & cross bars

Double Bend Shaft Kits

Wood kits include shaft sides, cross bar, circle bar & flat end Draft size 111/16" x 23/16" 85" to cross bar singletree.

Hardware kit includes shaft tips, hold back loops, singletree caster, yoke, wear plate, trace holders, ¾ x 5½ carriage bolt, shaft irons, (2) ¼" tee plates, (2) 5/16" tee plates, (18) 5/16" x 2 ¼" carriage bolts & (6) ¼" x 3½" carriage bolts.

77-A	Regular shaft wood kit
77-AA	Regular shaft wood & iron kit
77-B	Regular shaft wood & hardware kit
77-C	Regular shaft assembled
77-D	Regular shafts painted
77-E	Draft shaft wood kit
77-F	Draft shaft wood & hardware kit
77-G	Draft shaft assembled
77-H	Draft shafts assembled & painted

Shafts with other types of singletrees are available & will be charged accordingly.

We will also paint shafts other colors, price on application.



Shafts for Anderson Fifth Wheel

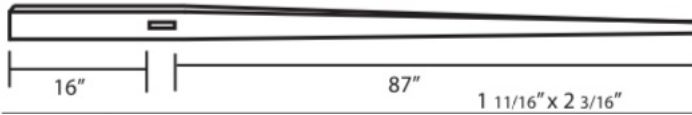
Draft size 1 11/16" x 2 3/16" 85" to crossbar

78-H	One side only
78-I	Two sides & cross bar
78-J	Bundle of 3 pair with cross bars

Regular size 1 1/2" x 2" 75" to cross bar

78-K	One side only
78-L	Two sides & cross bar
78-M	Bundle of 3 pair with cross bars

Draft Size Straight Heel Wagon Shafts



79-A	One side only
79-B	Two sides & cross bar
79-C	Bundle of 3 pair with cross bars

Straight Heel Cart Shafts



Dimensions: 1 3/8" x 1 7/8" x 10'

79-D	One side only
79-E	Two sides & cross bar
79-F	Bundle of 3 pair with cross bars

Dimensions: 1 3/4" x 2 1/4" x 11'7" Flat type

79-G	One side only
79-H	Two sides & cross bar
79-I	Bundle of 3 pair with cross bars

Dimensions: 1 1/4" x 1 3/4" x 8' Mini size

79-J	One side only
79-K	Two sides & cross bar
79-L	Bundle of 3 pair with cross bars

Bent Heel Cart Shafts



1 1/2" x 2" x 10' (10' overall length of wood) A=9'9 1/2" B=18 1/2"

79-M	One side only
79-N	Two sides & cross bar
79-O	Bundle of 3 pair with cross bars

1 3/4" x 2 1/4" x 11'7" (11'7" overall length of wood) A=11'5" B=18 1/2"

79-P	One side only
79-Q	Two sides & cross bar
79-R	Bundle of 3 pair with cross bars

Bent Heel Cart Shafts



1 1/2" x 2" x 9 1/2' A=9'3 1/2" B=18 1/2"

80-A	One side only
80-B	Two sides & cross bar
80-C	Bundle of 3 pair with cross bars

1 3/4" x 2" x 11' A=10'10", B=18 1/2"

80-D	One side only
80-E	Two sides & cross bar
80-F	Bundle of 3 pair with cross bars



Double Bend Cart Shafts



Horse size: 1½" x 2" x 11' A=75", B=32", C=8"

80-G	One side only 84"
80-H	Two sides & cross bar
80-I	Bundle of 3 pair with cross bars

Pony size: 1½" x 2" x 10'

80-J	One side only 75"
80-K	Two sides & cross bar
80-L	Bundle of 3 pair with cross bars

Draft size: 1¾" x 2¼" x 11'7"

80-M	One side only 90"
80-N	Two sides & cross bar
80-O	Bundle of 3 pair with cross bars

Jog Cart Shafts

Pony size: 9' overall length

Straight heel pony

80-P	One side only
80-Q	Two sides & cross bar
80-R	Bundle of 3 pair with cross bars

Drop heel pony

80-S	One side only
80-T	Two sides & cross bar
80-U	Bundle of 3 pair with cross bars

Horse Size Quick Hitch

Drop heel

80-V	One side only
80-W	Two sides & cross bar
80-X	Bundle of 3 pair with cross bars

Jog Cart Shafts



Jog Cart shafts are not for a racing bike but for the jogging carts. Available in straight heel or drop heel.

Straight Heel

81-A	One side only
81-B	Two sides & cross bar
81-C	Bundle of 3 pair with cross bars

Drop Heel

81-D	One side only
81-E	Two sides & cross bar
81-F	Bundle of 3 pair with cross bars

Coupe End Gig Shafts



Straight Heel Coupe Bend Gig Shafts

Draft size 1¾" x 2¼" x 11'7"

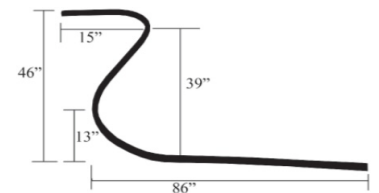
81-G	One side only
81-H	Two sides & cross bar
81-I	Bundle of 6 pair with cross bars

Horse or Pony size 1½" x 2" x 10'

81-J	One side only
81-K	Two sides & cross bar
81-L	Bundle of 6 pair with cross bars

Cutter Runners

Following are some of the cutter runners and railings we stock. We can have other sizes and shapes made on request, but we



need a pattern or accurate dimensions and sketches. Cutter runners can not be shipped UPS in their entirety. We can cut them in two to ship, then they will have to be spliced together. Truck freight shipping is an option.

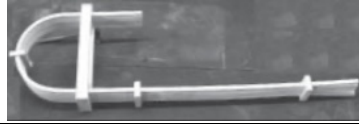
Portland Cutter Runner

83-A	Portland cutter runner
83-B	Bundle of 3 pair



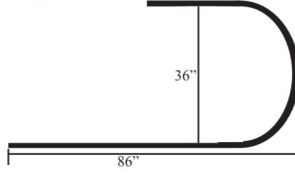
Cutter Railing

7/8" x 7/8" 62" overall
(Can be shipped UPS.)



83-C	Cutter railings
83-D	Bundle of 3 pair

Cutter Runners



84-A	7/8 x 7/8 Cutter runners
84-B	Bundle of 3 pair
84-C	1 x 1 1/4 Cutter runners
84-D	Bundle of 3 pair

Bending Birch Plywood

Bending birch plywood is an easy bending plywood which can be used for sleigh dashes or any carriage where a radius has to be formed. Can be laminated for more thickness. One side is birch, the other side is luan.

84-E	Bending birch, 4x8 sheet
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Bobsled Runners

84-F	Bobsled Runner 2 1/2" x 2 1/2" x 6" (pr.)
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Buggy Poles or Tongues



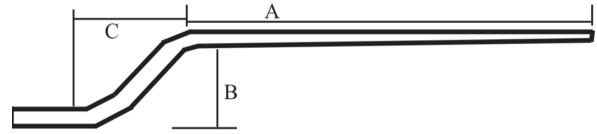
Single bend horse poles 1 3/4 x 2 1/4 A=109", B=10"

85-A	Single bend pole
85-B	Bundle of 3

Single bend pony poles 1 1/2 x 2 A=90", B=8"

85-C	Single bend pony pole
85-D	Bundle of 3

Double Bend Poles



Double bend horse poles 1 3/4 x 2 1/4 A=109", B=8", C= 12"

85-E	Double bend buggy poles
85-F	Bundle of 3

Double bend pony poles 1 1/2 x 2 A=90", B=7", C= 12"

86-A	Double bend pony poles
86-B	Bundle of 3

Draft Poles

Double bend draft poles 1 7/8 x 2 1/2 A=119", B=9", C= 12"

86-C	Double bend draft poles
86-D	Bundle of 3

Single bend draft poles 1 7/8 x 2 1/2 A=119", B=11"

86-E	Single bend draft pole
86-F	Bundle of 3

The heel of the poles are not tenoned, but can be upon request.

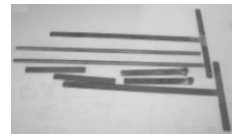


Pole Circles

86-G	Buggy Pole Circle, A=41", B=16"
86-H	Pony Pole Circle, A=36", B=15"
86-I	Draft Pole Circle, A=44", B=22"

Pole Irons

The irons with the eyes are 48" long. End pieces are 5/16" x 1" steel. Center pieces are 5/8" round. We will not form the irons unless we assemble the complete pole.



87-A	Pole irons
87-AA	Pole side irons only



Pole Eveners



87-B	Pole evener wood blank 1 3/8 x 2 1/4 x 43 Our standard horse size.
87-D	Draft evener 2 x 3 1/2 x 50
87-E	Pole evener 1 3/8 x 2 1/2 x 45
87-F	Pony evener 1 3/8 x 2 x 36

Hickory Neck Yokes



Acorn end neck yokes We can install rings on the neck yoke ends.

88-A	41" Horse size
88-B	48" draft size
88-C	36" Pony size
88-D	32" Mini size



All Leather Center Yoke

88-E	Leather center yokes
88-F	Leather center yoke (economy)



Footman Loops

88-G	1 1/2" Nickel
88-H	1" Nickel
88-I	1 1/4" Brass
88-J	1 1/2" Stainless steel

Heavy Footman Loops

88-K	2" Chrome
88-L	2" Brass
88-M	3" Chrome
88-N	3" Brass

Line Holders



88-O	Chrome
88-P	Brass

Pole End Caps



89-A	Steel pole caps
89-B	Polished brass pole caps
89-C	Zinc pole caps

Pole Crabbs



89-D	Unpolished brass pole crabb w/ hook
89-E	Unpolished brass pole crabb w/ hook
Items below are not in stock but can be ordered	
89-F	Polished brass pole crabb w/hook
89-G	Polished brass pole crabb less hook
89-H	Chrome pole crabb w/hook
89-I	Chrome pole crabb less hook

Safety Loops



90-C	Brass Safety Loops
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Pole Evener Kits

Kit includes evener blank, (2)round end singletrees, hooks & ferrules, singletree center, (2)singletree clevis & plates, evener wear plate, (2)5/16" x 4 1/2" carriage bolts & (2) 90-C safety loops.

90-E	Evener kit, knocked down
90-F	Evener assembled
90-G	Draft evener kit w/ brass premium hooks
90-H	Draft evener assembled
90-I	Pole evener straps
90-J	Pole neck yoke straps



Ironed Poles

We have poles available in kits or assembled. Kits include pole, evener, singletrees, neck yoke, leather yoke, irons, end cap, evener caster, clevis & plates, safety loops, hooks & ferrules. Bolts are not included & irons are not formed. We have a lot of different options for your singletree ends on these poles.



The prices will vary, pending your preference,

91-A	Single bend pole kit
91-B	Single bend pole assembled w/ hook ends
91-C	Double bend pole kit
91-D	Double bend pole assembled w/hook ends



Stiff Pole

For full circle fifth wheel.

91-E	Stiff pole 3" x 2½" x 12'
91-F	Stiff pole 3" x 2½" x 12' Bundle of 3
91-G	Stiff pole 2¼" x 2¼" 10'
91-H	2¼" x 2¼" 10' - Bundle of 3
91-I	Stiff pole 2½" x 2½" x 12'
91-J	2½" x 2½" x 12' - Bundle of 3
91-K	Stiff pole 2⅝" x 2⅝" x 9' Pony
91-L	2⅝" x 2⅝" x 9' Pony - Bundle of 3

The heel end is not shaped to fit the fifth wheel. You must do that yourself, or send us a pattern. We will charge extra to shape the heel end.



Anti-Rattlers

94-A	Anti-rattler for 40-A coupler
94-B	Anti-rattler for 40-A shaft coupler
94-C	Anti-rattler for 40-B shaft coupler



Wire Lock Pins

Use for quick shaft change. ⅜ x 2¼ bolt

95-A	Wire lock pins
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Tug Stops



95-B	Straight brass tug stop
95-C	Curved brass tug stop
95-D	Straight chrome tug stop
95-F	Stainless 5 ½" per pair
95-G	Stainless 5 ½" curved per pair
95-H	Stainless 4" per pair
95-I	Tug Stop Brass plug
95-J	Tug Stop Brass post
95-K	Tug Stop Chrome plug
95-L	Tug Stop Chrome post
95-M	Lightweight Stainless Pony 4"
95-N	Lightweight Brass Pony 4"



Sulky Trace Hooks

96-A	Sulky track hooks stainless
96-B	Sulky trace hooks brass

Roller Wear Iron



Attached to the side of the buggy box for wheel rub.

96-C	2⅝ x 5¼ Roller iron
96-D	3⅝ x 5¼ Roller iron
96-E	4 x 4½ w/ 1" roller painted black
96-F	4 x 4½ w/ angled roller painted black
96-G	Rub iron plates



Steps For Buggies & Carriages



97-A	Round step with star
97-B	Spring Wagon step
97-C	Axle step



97-D	Small double step w/round plates - order left or right side
97-E	Small double step w/square plates
97-F	Mini step w/round plate
97-G	Mini step w/square plate

Surrey Steps

Rear surrey step.
 Plate is 6" x8" x 10½" high.
 Extends 16" out.
 Plate is ⅛" ribbed



98-A	Single surrey step
98-B	Double surrey step

Decorative Rear Surrey Step

These steps are made with a design and the ends are raised with the purpose of attaching fenders to them.

98-C	Decorative surrey single step
98-D	Decorative surrey doublestep



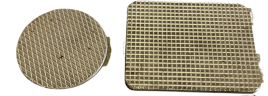
High Water Cart Step

98-F	High water cart step-order right or left side
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Surrey Step Plates

98-G	Regular step plate - ⅛ x 6 x 8
98-H	Decorative step plate - ⅛ x 6 x 8
98-I	Carriage step plate - 6 x 12



Step Plates

98-J	4" x 4½" Step plate (machined design)
98-K	5" x 6½" Step plate (machined design)
98-L	4½" Round step plate w/star (machined design)
98-M	4½" Round step plate (machined design)
98-N	4½" Round step plate
98-O	5" Round step plate



LIGHTS

Replacement Lens

99-A	Red lens 3 screw
99-B	Amber lens 3 screw
99-C	Clear lens 3 screw
99-D	3 Screw Gasket
99-E	3-screws (set of 3)
99-F	Red lens-snap on
99-G	Amber lens-snap on
99-H	Clear lens-snap on
99-I	O-ring for lens-snap on

Plastic Two Way Blinker Light

4 5/16" diameter snap-on plastic lens requires no retainer rings or screws. Black Lexan housing. Single wire. 1/2" diameter mounting stud. Bulb # 1156 12 volt. Red & amber lenses. Lens are marked 567. economy

99-J	Blinker light, Red & Amber
99-K	Red replacement lens
99-L	Amber replacement lens

Chrome Regular Incandescent - 2-way Lights w/Screw on Lens



99-M	Side Lights, Red & Clear
99-N	Blinker Lights, Red & Amber

LED Chrome 2-way Lights w/Screw on Lens

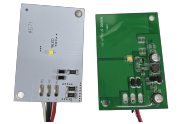


99-O	LED, red & clear
99-P	LED, red & amber

LED 2-way lights Flat Lens



99-Q	LED, red & clear, flat lens
99-R	LED, red & amber, flat lens



LED 2-way Conversion Kits

99-S	LED, red & clear insert
99-T	LED, red & amber insert
99-U	Combo, (clear-amber) & red inserts
99-V	Combo, (clear-amber) & (red-red) inserts
99-W	Amber & Amber inserts
99-X	Amber & Amber LED lights
99-Y	Combo (clear-amber) & red LED lights

LED Headlights



100-C	Small w/ 3 LEDs, #630 600 lumens
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100-D	Small 2" round 2 LEDs, #10SP 300 lumens
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100-E	Brightzone black, 1400 lumens
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LED Headlights (bright white light)

100-F2	3"x 2" w/2 LEDs, 750 lumens
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100-F4	3" x 3" w/4 LEDs, 1100 lumens
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100-F6	6" x 2" w/6 LEDs, 1900 lumens
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LED Side Marker Lights

Flush mount 4-LED (football shaped)



Flush mount- Black - 4 LED(football shaped)	
100-K	Red
100-L	Amber
100-M	Clear
100-N	Blue
100-O	Green

LED Linear Dragon Lights w/ 4 LEDs



	1/2" x 1 5/8"
101-A	Red
101-B	Amber
101-C	White
101-D	Blue
101-E	Green
101-F	Purple
101-G	Black Vertical case
101-H	Black undermount case

LED Oval Dragon Lights w/ 4 LEDs



	5/8" x 1 1/2"
101-K	Red
101-L	Amber
101-M	White
101-N	Blue
101-O	Green
101-P	Purple
101-Q	Black case
101-R	Stainless steel case

LED Side Marker Light



	1" x 2 1/2"
102-A	Red (clear lens)
102-B	Red (red lens)
102-C	Amber (clear lens)
102-D	Amber (amber lens)
102-E	Black base
102-F	gasket
102-G	Gasket with black base
102-H	Gasket with chrome base



	3/4" x 3 1/2"
102-J	Red (clear lens)
102-K	Red (red lens)
102-L	Amber (clear lens)
102-M	Amber (amber lens)
102-N	White (clear lens)



LED Side Marker Light



3/4" x 1 1/2"	
102-O	Red w/ adhesive mounting
102-P	Amber w/ adhesive mounting



102-S	Amber, 3/4 " round, grommet mount
102-R	Red, 3/4 " round, grommet mount

Axle Lights LEDs



102-V	3-LEDs, white, 1" x 3"
102-W	Stainless Steel vertical case

LED Step Light



100-J	Clear w/ 3 LEDs
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Clock LED Lights



102-Y	Black 2" High
102-Z	Black 1" High

LED Bar Light



103-A	Red 10" LED Brake light, 28 LEDs,w/5' wire lead
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LED Bar Light



103-B	Amber 15" bar light, 11 LEDs, clear lens
103-C	Amber 15" bar light, dual function 11 LEDs 3-wire
103-D	Amber 15" bar light, dual function 11 LEDs, clear lens 3-wire
103-E	Red 15" bar light, dual function 11 LEDs, 3 wire
103-F	Red 15" bar light, dual function 11 LEDs clear lens 3- wire
103-G	Clear 15" bar light w/ black base, 11 LEDs
103-H	Clear 15" bar light w/ white base, 20 LEDs



103-J	Amber 14" black body, w/3-pc Amber lens LED
103-K	Red 14" black body, w/3-pc Red lens LED

Circuit Breaker

Automatic Reset

103-T	15 amp circuit breaker
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Pigtails

103-U	Pigtail for double contact bulb
103-V	Pigtail for single contact bulb



Dome Lights



104-A	Dome LED SILHO 1.5" Round w/Stainless Ring
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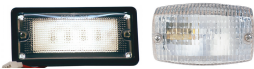
104-B	Dome LED SILHO 2.75" Round w/Stainless Ring
104-C	Dome LED SILHO 2.75" Round w/Black Ring (not as bright as the stainless 104-B)



104-D	Dome LED 2 1/2" x 4 1/2" rectangle, 12 LEDs w/switch, black base
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104-E	Dome LED 2 1/2" x 4 1/2" oval, 6 LEDs w/switch, black base
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104-J	Dome Light - Recessed
104-K	Dome Light 393 Rectangular w/ switch

LED EON Lights w/ 3 LEDs



3/4" x 3"	
105-A	Red
105-B	Amber
105-C	White
105-D	Blue
105-E	Green
105-F	Stainless Steel vertical case
105-G	Stainless Steel undermount case

Turn Signal Lights



106-A	Amber, 2 1/2 x 4 1/2, flush mount 14 LEDs
106-B	Black steel turn light undermount bracket
106-C	Amber, Flush mount 393
106-D	Amber turn light w/black mounting base Silko 18 LEDs
106-E	Amber recessed turn light w/black base



LED Ottlights

106-F	Red
106-G	Amber
106-H	White 15°
106-I	White 15° & Amber

Round Indicator Lights (1/2 inch hole)

107-A	Red LED
107-B	Amber LED
107-D	Green LED
107-F	Red
107-G	Amber
107-H	Blue
107-I	Green
<u>These lights are fairly dim and take a 5/16 inch hole</u>	
107-J	Red small LED
107-K	Amber small LED
107-L	Blue small LED
107-M	Green small LED



Insulated Wire Staples

108-A	Wire staples 1/4" x 5/8", per c
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Insulated Wire Terminals



108-B	Quick splice per C
108-C	Butt connectors 16 ga. per C
108-D	Butt connectors 16 ga. Non- insulated per C
108-E	Butt connectors 18 ga. Non- insulated per C
108-F	3/16" ring end per C
108-G	1/4" ring end per C
108-H	5/16" ring end per C
108-I	3/8" ring end per C
108-J	Spade terminal per C
108-K	Male disconnect per C
108-L	Female disconnect small per C
108-M	Female disconnect per C
108-N	Female disconnect w/ side terminal per C
108-O	Yellow twist caps per C
108-P	Parallel connectors 16 ga. Non insulated per C
108-Q	Parallel connectors 18 ga. Non insulated per C

Shrink Tube

108-S	Shrink Tube - Black - 1/8"
108-T	Shrink Tube - Black or Red- 3/16"
108-U	Shrink Tube - Black or Red - 1/4"
108-V	Shrink Tube - Black - 3/8"
108-W	Shrink Tube - Black - 1/2"
108-X	Shrink Tube - Clear - 1/8" w/ adhesive
108-Y	Shrink Tube - Clear - 3/16" w/adhesive
108-Z	Shrink Tube - Clear - 1/4" w/adhesive

Plastic Primary Wire

Single wire. White, Black, Red, Blue, Green, Brown, Yellow

109-A	Per Foot, 16 gauge Single wire
109-B	100' rolls, 16 gauge Single wire
109-C	500' rolls, 16 gauge Single wire
109-D	1000' rolls, 16 gauge Single wire
109-E	Per Foot, Double wire black&red 18 gauge
109-F	Per Foot, Double wire black&black 16 gauge



Electrical Tape

109-H	3/4" x 66' Electrical Tape
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Mirrors



110-A	Chrome oblong mirror 3 1/2 x 5 3/4, Two mounting holes. Use right or left side
110-B	<u>Black plastic mirror</u>
110-C	Black plastic w/marker light. Comes w/clear, amber, green, & blue lens
110-D	<u>Black mirror w/bracket</u>
110-E	Stainless steel mirror w/bracket

Bulbs

110-F	#93
110-G	#1003
110-H	#1156
110-I	#1156-amber
110-J	#1157
110-K	#1176
110-L	55-watt halogen bulb



Plastic Battery Box

Battery box mounts under the floor of buggy box to give you more storage room under the seat. Dimensions: 7½ x 11½ x 9½, outer flange: 11 x 15 This box will fit 27 & 24 group batteries.

111-A	Battery box
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Battery Clamps

111-B	Battery Clamps, copper
111-C	Battery Clamps, 3" stainless steel
111-D	Battery Clamps, copper w/black handles
111-E	Battery Clamps, copper w/red handles



Batteries

111-F	Battery, Deep Cycle 27-180
111-G	Battery, Deep Cycle 24-140
111-H	Battery, Sealed 35 AMP HR
111-I	Battery, Deep Cycle 24-140 import
111-J	Battery, Lawn & Garden, U1L-300
111-K	Battery, Starting 800CC, P24-800
111-L	Battery, Lithium 35 AMP



Battery Gauges

111-N	Battery Gauge LED
111-O	Battery Gauge Digital
111-P	Battery Gauge Round

Solar Panels and Controllers

111-R	Solar Panel 20 W. 12 V.
111-S	Solar Panel 10 W. 12 V.
111-T	Solar Controller, 4.5 AMP. 12 V.
111-U	Solar Controller, 20 AMP. 12 V.
111-V	Solar Controller, 10 AMP. 12 V.
111-X	Battery Stand wood

Buggy Buddy

111-MAL	DeWalt-Milwaukee, max
111-MALD	DeWalt-Milwaukee, double
111-MALH	DeWalt-Milwaukee, heater
111-MAK	Makita, max
111-MAKD	Makita, double
111-MAKH	Milwaukee, heater

Nails

112-A	Shiny Black upholstery nails ½" shank, 3/8" head, rust resistant
112-C	Trunk nails 5/8" chisel shank, 3/16" head. Black only.
112-D	5/8" Drive knob nail
112-E	7/8" Drive knob nail
112-F	Brass upholstery nails, ½" shank, 5/16" head
112-G	Chrome upholstery nails, ½" shank 5/16" head
112-H	Brass Oxford upholstery nails, 7/16" head
112-I	Brass upholstery nails ½" shank, 7/16" head
112-J	Chrome upholstery nails ½" shank, 7/16" head



Fasteners - Lift The Dots



113-A	LTD socket
113-B	LTD clinch plate
113-C	LTD 5/8 stud
113-D	LTD double stud
113-E	LTD 3/8 stud
113-F	LTD bolt stud w/nut
113-G	LTD clinch stud
113-H	LTD clinch stud plate
113-I	100 LTD sets
113-J	1000 LTD sets
113-K	LTD long prong socket

Lift the Dots are sometimes ordered in sets. One set consists of 1-socket, 1-plate, and 1-stud. Either 5/8" stud or 3/8" stud. Please specify when ordering, otherwise we will ship 5/8" stud.



Lift The Dot Tools

113-M	LTD punch
113-N	LTD stud driver

Common Sense Fasteners



114-A	C.S Eyelet
114-B	C.S. Plate
114-C	C.S. Stud
114-D	C.S. Clinch prong stud
114-E	C.S. Clinch plate
114-F	C.S. Stud screw base
114-G	C.S. Stud with 8/32 bolt
114-H	C.S. Stud with double post

Common Sense Eyelet Punch



114-J	C.S. Eyelet punch
114-K	C.S. Stud driver

Durable Fasteners



115-A	Durable button
115-B	Durable socket
115-C	Durable stud
115-D	Durable eyelet

Price on dies available on request for Durable dots.

Welt Tips



116-A	Welt tips, stainless
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Hidem Welts



5/8" wide. Black. Other colors available on request. 50 yd. rolls

116-B	Black Grain 25 yd roll marine grade
116-C	Hidem welt black per ft.
116-D	Black Grain 25 yd roll
116-E	Black Grain 200 yd roll

Single Bead Gimp

116-G	Black single cord gimp old style per ft
116-H	Black single bead solid vinyl per yd
116-I	Black single bead solid vinyl 100 yd roll



Thread - Bobbins



117-A	1 lb. Spool, Black nylon bonded #69
117-B	1 lb. Spool, Black nylon bonded #92
117-C	Bobbins - Type G - Black only #69
117-D	Bobbins - Type G - Black only #92
117-E	Needles for sewing machine 135 x 17
117-F	Needles 135 x 16 diamond cut same size but sharper



Slow Moving Vehicle Emblem

SMV emblems are available in aluminum backer or all plastic with reflective border, or stick-on decal.

117-H	SMV lighted LEDs
117-I	SMV black durable back
117-J	SMV metal
117-K	SMV decal - stick on
117-L	SMV Back only (for Lighted SMV)

SMV Brackets, Sockets & Spades

117-O	Fold down bracket w/rubber inserts
117-P	Swing away bracket
117-Q	Fold down bracket with spring- black
117-R	SMV socket
117-S	SMV spade
117-T	SMV L bracket - steel, 10" high, 2 1/2" L, Black

Curtain Lights



118-A	3 x 5 3/4 curtain light
118-B	Replacement glass 2 5/8" x 5 1/2" for 118-A & 118-E
118-C	Replacement oval glass
118-D	4 3/8 x 6 1/2 oval curtain light
118-E	3 1/2" x 6 3/8" Black plastic curtain light 2-pc set w/ screws

Storage Mesh and Hat Savers



118-N	12" Storage mesh
118-P	Hat saver

Folding Top Parts



119-A	3-bow top socket per pair
119-B	Rams horn top socket per pair
119-C	4-bow top socket per pair

Surrey Sockets



119-D	Surrey Sockets per pair
119-E	3- seat surrey sockets (extra heavy duty) per pr



Mud Guard

The mud guard is the apron that attaches to the shaft crossbar and the axle, to protect the front of the buggy from stones and mud. Guards are 33" wide by 27" long w/ wire stiffeners & straps to attach. Material is Herculite, a tough PVC material with fiber inlays.

120-A	Mud guard w/ 4" straps
120-B	Mudguard w/extra flap to protect fifth wheel & brake pedal w/ 4" straps
120-C	Mudguard w/extra flap, less straps
120-D	Mudguard w/extra flap, w/ 4" straps, extra wide
120-E	Mud Guard PVC w/ 2" footman loops
120-G	7" Mud guard straps
120-H	10 1/2" Mud guard straps
120-I	14" Mud guard straps

Diaper Bags

120-K	Diaper Bag for carriages
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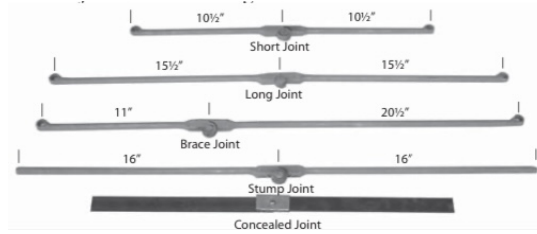
Reed

A flexible half round wood trim used for trimming buggies and sleighs. Stocked in 3 sizes, comes in random lengths. Order by the foot.

120-M	3/8" Reed
120-N	1/2" Reed
120-O	5/8" Reed

Top Joints

The joints are made from 1/2" round stock, welded to cast knuckles, with eyes on each end. The stump joints do not have the end eyes welded on, so they can be made to the desired length if the standard joints are not the right length.



121-B	Single joints (special size)
121-C	Stump joints
121-D	3-bow joint set (3-bow joints, 2-shorts, 2-brace)
121-E	Surrey joints (one set surrey joints, 2- shorts, 2-brace, 2-longs)
121-F	Concealed joint pr.
121-G	4 Bow Joint Set

Concealed joints are attached to the inside of the rear 2 sockets on most tops. We make them from 1/4 x 1/2 flat stock. 15" long from the center. These must be ordered separately, not included with the outside joints.

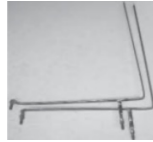
Top Props



Top props are stocked in two lengths of 7/16" bolt. Other lengths can be made on request.

When ordering separately, please specify short or long.

122-A	Props only
122-B	Props w/bells
122-C	Props w/bells & nuts
122-D	Set of props for 3-bow top (2-short & 2-long)
122-E	Set of props for surrey top (2-short & 4-long)
122-F	Plain prop nut
122-G	Chrome prop nut
122-H	Brass prop nut
122-I	Black prop nut
122-J	Bells only
122-K	Top Joint Castings
122-L	Top Joint Large Head Rivets
122-M	Top Prop nut plates only



Shifting Rails

Shifting rails are in halves, less the mountings to fasten onto the seat brackets, with side arms and back standards.

123-A	Shifting rails w/1/2" round
123-B	Shifting rails with 9/16" x 3/8" oval steel
123-C	Shifting rails mounting bolts(for round rail only)

Prop Block Rubbers

123-E	Prop rubber 48"
123-F	Prop rubber per inch

Repair Tubes

Repair tubes for top sockets to replace rusted or broken sockets. Order in pairs or left or right.

123-G	Top repair tubes
123-H	Top repair tube center socket (3-bow)

Top Joints

124-A	10 1/2" x 10 1/2" short joint
124-B	15 1/2" x 15 1/2" Long
124-C	20 1/2" x 11" brace (left or right)
124-D	15 1/2" x 10 1/2" (left or right)

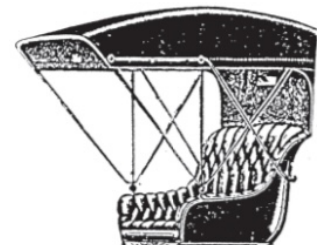
Top Bows

Top bows stocked in sizes from 38" - 50" in 1" increments, the rest in 2" increments.

Measurements from outside bows.

124-F	38"
124-G	39"
124-H	40"
124-I	41"
124-J	42"
124-K	43"
124-L	44"
124-M	45"
124-N	46"
124-O	47"
124-P	48"
124-Q	49"
124-R	50"
124-S	52"
124-T	54"
124-U	56"
124-V	58"

Auto Seat Top

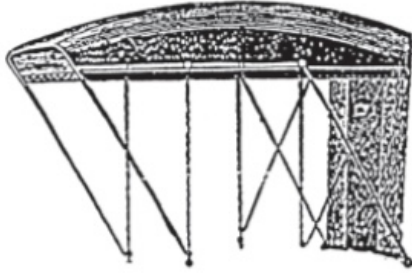


The auto seat top is available in kits or completely assembled. If we assemble the top we must have the seat. We will not build them without the seat. Kits include sockets, joints, props & nuts & bows. Please give the width of bows when ordering. Kits do not include lining or any of the material to cover. Please order separately.

125-A	3-bow top kit
125-B	3-bow top complete
125-C	4-bow top kit
125-D	4-bow top complete



Extension Top For Surrey



We will also not build unless we have the seats.

126-A	Surrey top kit
126-B	Surrey top complete

Light Brackets



Black powder coated

126-C	Blinker light bracket, 3 x 3
126-D	Side light bracket, 9" long

Bulldog Cabinet Door Catches

126-E	Bulldog catch
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Aerosol Spray Cans

127-A	Grey primer, net 16 oz.
127-B	Gloss black gloss paint, net 12 oz.
127-C	Mist & Shine, detailer, adds gloss to buggy, etc., 22 oz.
127-D	303 vinyl protectant, 1 gallon
127-E	303 vinyl protectant, 32 oz.
127-F	303 vinyl protectant, 16 oz.
127-G	631 contact cement, net 19.75 oz.
127-H	NV30 contact cement net 15 oz.
127-I	Star-Stuk remover, net 13 oz., removes adhesive, glue, grease, ink, stickers etc.
127-J	Brake Kleen, net 19 oz.

Aerosol Cans cont'd

127-K	Glass cleaner, net 19 oz.
127-M	Fabric cleaner & spot remover, net 16 oz.
127-N	Contact Cement - bulk
127-O	Buggy Wash (Touch Free gallon)
127-P	Super Care wash 8 oz.
127-Q	Battery Spray 11 oz. cleaner



Steel Powder Coated Hitch Parts

128-A	Buggy hitch plate black
128-B	Buggy hitch plate black w/ 2 1/2 " drop
128-C	Single buggy H.D. hitch (clamp on)
128-D	Surrey buggy H.D. hitch (clamp on)
128-E	Single buggy H.D. hitch w/3" drop (clamp on)
128-F	Surrey buggy H.D. hitch w/3" drop (clamp on)
128-G	1 7/8" hitch ball
128-H	2" hitch ball
128-I	Hitch Coupler 1 7/8 x 2 1/2

Steel Hitch Pins

128-K	Hitch Pin 3/4 x 6 1/4 " yellow zinc T-handle
128-L	Hitch Pin 5/8 x 6 1/4 " zinc T-handle
128-M	Hitch Pin 5/8 x 6 " Black



Steel Shaft Extenders

128-O	Steel shaft extender black
128-P	Steel shaft extender black w/green nylon inserts
128-Q	Steel shaft extender black w/black rubber inserts



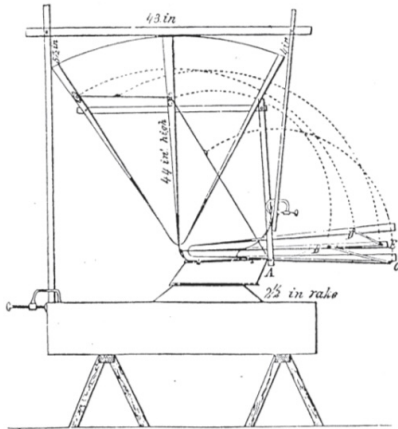
Simple Directions for Setting a Buggy Top

Putting on Props - Taking Length of Joints - Determining Position of Knuckles

To set up a buggy top, first set the body on trestles, and level it. Then place the shifting rail on, and screw the nuts up tight, so that there will be no slipping. See that the flat-irons are straightened, and holes countersunk to fit the screws.

The following cut represents the top set up. While some use a form, others work by draft, and others use the above, which is simple and can be understood by all. The 3 strips of wood employed for this purpose can be picked up about the shop, and placed in position as shown in the drawing. The fourth stick is a "height stick" and is cut 44 inches long, which is the height of the middle bow from the seat.

First put the strip on the lazy-back with a thumb screw, and then the horizontal piece, placing the "height stick" with the thickness of the bow higher under it. The stick is then leveled, and a screw placed in the back end.



The front end is then put on, being careful to keep the top stick level. Put a thumb screw on at the panel, with a piece of leather on both sides to prevent scarring. Then place a screw on the top. These end strips are now supposed to be 43" apart, the length of top. Then mark the place for the center bow, 1 1/2" greater space front than back. The center bow should stand plumb on the back edge. Mark 5 1/2" down on the front stick and 4" on the back. Then place a plumb-bob at the top, at the mark on the back stick, to determine the rake, which is 2 1/2". If it does not measure that, stick a wedge at the top or bottom of the lazy-back, to throw the top out or in. Put up the center bow first, using the "height stick" under both sides, just inside the bend. Mark & saw off 1/2" above the rivet, and then replaced, and put a screw in the top and bottom of the flat-iron.

The front and back bow are each treated in a similar manner, putting the top of the bows to the marks on the front and back sticks. When all the bows are up, place strips along the sides, squaring the bows, and as each is secured, put a strip from the prop iron at the back corner of the seat, and screw to the stick above. The bows are now secure, and we may proceed to determine the position of props. **Cont'd on next page**

Position of Props

Place a straight-edge across the front bow, and measure from the inside at the top to the straight edge, 6 1/2". Mark each side, then put the straight-edge on the side, with the front at the mark on the front bow, and when level, mark each bow. Take the front prop, and place the back edge to the back edge of the bow, directly on the mark, and screw in in that position. The center of the back prop is put 1/4" above the line. When all are on we then proceed to take the length of the joint and determine the position of knuckles.

Length of Joint & Position of Knuckles

Prepare a board about 3' long and 6" wide, and make 4 straight lines. Drive a 16 oz. tack 1 1/8" from the end in each of the lines, and measure the length of the 4 joints from the center of joints, and mark them right and left respectively. Measure the distance between the middle and back bow, and mark it on top to about where they would be when the top is trimmed. Take a string with no stretch, and take the length of the long joint from the board. Place one end to the prop A, and the other to prop B. Then draw the string out double to the point at C, and put the measurement from B to C on the board, and drive a tack for the position of the knuckle. Proceed the same way from B to D, and then to the knuckle E. The measurement thus taken is sent to the smith-shop to be made, and the bows to the wood-shop to be rounded.

Top Cover Material

There are many types of material that can be used for top material, but listed below are some of the materials we use. For samples of our vinyl & upholstery send \$6.50 for postage & handling. The VS-ABM is a tough material, with very little shrinkage, and is what we use on most of our Amish buggy tops. It comes in black only with a black backer, in grain finish. The Wallaby is what we use mostly to cover our folding tops. It is black with white backers. All top material is 54" wide unless noted.

129-C	Wallaby, shallow grain
129-D	Wallaby, deep grain
129-E	Black Herculite canvas, 61" wide
129-H	Vinyl Black(VS-ABM grain)

Patina (Imitation Patent Leather)

.0004 Thickness

This product is used to cover fenders and dashes. It has a high gloss shine. Available by the yard cut or rolls of approx. 40 yds. Price per yd.

130-A	Black Patina @yd
130-B	White Patina @yd



Velcro-25 yd. Rolls

130-D	1" Velcro hook w/adhesive back
130-E	1" Velcro loop w/adhesive back



Fringe

130-H	6" Rayon, 18 yd roll, red, black, gold, blue, white, maroon & green
130-I	6" Heavy Rayon, 18 yd roll, black, maroon, gold & red

Please specify color when ordering. We don't stock the heavy Rayon but can get it within a week.

Dashes

We will make dashes to your specifications. We must have complete dimensions, width, length, style and mounting holes. We will make them with flat or round or oval steel. We can add a steel welded rein rail or drill holes for your fancy end rein rails.

131-A	Dash w/flat steel, frame only
131-B	Covered with patina
131-C	Dash Frame only w/ steel rein rail
131-D	Covered with patina
131-E	Dash w/oval steel
131-F	Covered with patina

Fenders

We will make fenders to your specifications. We must have complete details.

131-G	Fender w/flat steel
131-H	Fender w/round steel
131-I	Fender w/oval steel

Oval Steel

131-J	1/2" Oval steel
132-K	5/8" Oval steel

Brass Dash Rein Rails

We must have the measurement to the center bolts of the ends when ordering. Brass rods are 5/16" diameter, 72" long. 132-G & 132-H we stock 20"-36" in even numbers. We will cut to length and thread the ends on request.

132-A	Brass rein rail ends only ea.
132-B	Brass rein rail ends only ea.
132-C	5/16" brass rod (per in.)
132-D	Brass rod cut to length & threaded (per in.)
132-E	Brass center support for long rod
132-F	1 set brass rein rail complete - B ends
132-G	1 set brass rein rail complete - C ends
132-H	1/4" x 1 1/2" brass bolt



Wooden Cart Fenders

132-I	1/2 x 4 x 32
132-J	1/2 x 4 1/2 x 38
132-K	1/2 x 5 x 44
132-L	1/2 x 6 x 52

Aluminum Fenders

132-M	Complete set, w/out fifth wheel stop
132-N	Rear Fender
132-O	Rear complete set w/ bracket & axle mount
132-P	Front Right Fender
132-Q	Front Right complete w/ bracket & axle mount
132-R	Front Left Fender
132-S	Front Left complete set w/ bracket & axle mount
132-T	Rear Fender Bracket (spindle)
132-U	L-spring Bracket Rear
132-V	Front Right Fender Bracket (spindle)
132-W	Front Left Fender Bracket (spindle)
132-X	Axle Mounts (ea.)
132-Y	2 1/2" x 1" x 3/8" Flat Axle Bar
132-Z	Mudflaps (ea.)



Plastic Fenders

133-A	Complete set, w/out fifth wheel stop
133-B	Complete set, (torsion brackets)
133-C	Rear Fender
133-D	Rear complete set w/ bracket & axle mount
133-E	Front Right Fender
133-F	Front Right complete set w/ bracket & axle mount
133-G	Front Left Fender
133-H	Front Left complete set w/ bracket & axle mount
133-I	Rear Fender Bracket
133-J	Rear Fender Bracket (high tensile)
133-K	Front Right Fender Bracket
133-L	Front Left Fender Bracket
133-M	Rubber Mount (ea.)
133-N	Axle Mounts (ea.)
133-O	Axle Mounts, for torsion axles, (ea.)
133-P	Mounting Nuggets (ea.)
133-Q	Mudflaps
133-R	Box of all Hardware

Fenders for Pioneer Gears

133-U	Set, (rods, & brackets) less nuggets
133-V	Rear Bracket only
133-W	Rear Rods only
133-X	Front Bracket only
133-Y	Front Rods only

Folding Seat Back Irons



134-A	Folding cart seat irons
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Folding Seat Back



Irons (Buggy)

134-B	Folding seat back iron, buggy, 20½ high
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Plow Handles



134-D	Straight plow handle, 1¼ x 2¼ x 5'
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Tire Steel & Channel

The 1" & 1¼" comes in 11' & 12' lengths. All other sizes come in 20' lengths, and will be cut to desired lengths.

135-A	1 x ¾ x 11' or 12' channel
135-B	1¼ x ½ x 20' channel
135-C	1¼ x ½ x 11' or 12' channel
135-CA	1¼ x ½ x 20' channel
135-D	1½ x ½ 20' channel
135-E	2 x ½ x 20' channel
135-F	2½ x ⅝ x 20' channel
135-G	5/16 x 1 Flat tire steel
135-H	1 x ¾ Flat tire steel 11' or 12'
135-I	1½ x ¾ Flat tire steel 11' or 12'
135-J	1¼ x ¾ Flat tire steel 11' or 12'
135-K	½ x 20' Half round steel
135-L	1 Half round steel 11' or 12'
135-M	1½ Half round steel 11' or 12'
135-N	1¼ Half round steel 11' or 12'

Channel can be rolled and shipped UPS. We will charge a \$6.00 package & handling charge per package when shipped UPS.



Rubber Tiring



Round Top Flat Top

136-A	1" round top, use with 1" x 3/8" channel 60' coil
136-B	1" flat top, use with 1" x 3/8" channel 60' coil
136-C	1 1/4" round top, use with 1 1/4" x 1/2" channel, 50' coil
136-D	1 1/4" flat top, use with 1 1/4" x 1/2" channel, 50' coil
136-E	1" 1188 round top, use with 1" x 1/2" channel 50' coil
136-F	1 1/4" round top, for CMS wheels, 55' coil
137-A	1 1/2" round top, use with 1 1/2" x 1/2" channel, 40' coil
137-B	1 1/2" flat top, use with 1 1/2" x 1/2" channel, 40' coil
137-C	2" flat top, use with 2" x 1/2" channel, 25' coil
137-D	2 1/2" flat top, use with 2 1/2" x 5/8" channel, 12' coil
137-E	2 1/2" flat top, use with 2 1/2" x 5/8" channel, 18' coil

Round Rubber Tire

Only round, one hole, black in stock.



	Size	Channel	Coil Length
139-A	1/2"		120'
139-B	5/8"	3/4" x 3/8"	80'
139-C	3/4"		80'
139-D	7/8"	1 x 3/8"	65'
139-E	1"		60'
139-F	1 1/8"		53'
139-G	1 1/4"		50'
139-H	1 3/8"		44'
139-I	1 1/2"		40'
139-J	1 3/4"		34'
139-K	2"		30'

Tire Wire

140-A	45% silver brazing alloy, 5 oz.
140-B	Stay-Silv white brazing flux, 1 lb.
140-C	1/8" x 14' tire wire
140-D	1/8" x 16' tire wire
140-E	3/16" x 16' tire wire

Tire Installation

141-A	1 x 3/8 flat steel
141-B	1 1/8 x 3/8 flat steel
141-C	1 1/4 x 3/8 flat steel
141-D	1 1/2 x 3/8 flat steel
141-E	2 x 3/8 flat steel
141-F	2 1/2 x 3/8 flat steel
141-G	5/16 x 1 flat steel
	1/2 Round steel tire
141-H	1" half round steel
141-I	1 1/8 half round steel
141-J	1 1/4 half round steel
	Channel & rubber
141-K	1 x 3/8 with R.T. rubber
141-L	1 x 3/8 with F.T. rubber
141-M	1 1/4 x 1/2 with R.T. rubber
141-N	1 1/4 x 1/2 with F.T. rubber
141-O	1" Channel Only - Installed
141-P	1 1/4" Channel Only - Installed
141-Q	1 1/2" Channel Only - Installed
141-R	2" Channel Only - Installed
141-S	2 1/2" Channel Only - Installed
	1 1/2 Channel & rubber tires
142-A	1 1/2 with R.T. rubber
142-B	1 1/2 with F.T. rubber
	2 x 1/2 Channel & flat top rubber
142-C	2" channel & rubber
	2 1/2 x 1/2 Channel & flat top rubber
142-D	2 1/2 channel & rubber



Install New Rubber Tire Only

Round top new style	
142-E	1"
142-F	1¼"
142-G	1½"
Flat top rubber	
142-H	1"
142-I	1¼"
142-J	1½"
142-K	2"
142-L	2½"

Rubber Tires Installed

1" round rubber, 1 hole, installed. Installed on very small wheels.

143-A	5/8"
143-B	3/4"
143-C	7/8"
143-D	1"
143-E	1 1/8"
143-F	1 1/4"
143-G	1 3/8"
143-H	1 1/2"
143-I	1 3/4"
143-J	2"

Re-setting Tires on Old Wheels

The following prices to reset tires on old wheels may vary depending on the condition of the wheels.. To reset a wheel, we cut the tires and reweld them. We do not shrink them.

144-A	1" flat steel
144-B	1 1/8" flat steel
144-C	1 1/4" flat steel
144-D	1 1/2" flat steel
144-E	2" flat steel
144-F	2 1/2" flat steel
144-G	1" half round steel
144-H	1 1/8" half round steel
144-I	1 1/4" half round steel
144-J	1" channel & rubber
144-K	1 1/4" channel & rubber
144-L	1 1/2" channel & rubber
144-M	2" channel & rubber
144-N	2 1/2" channel & rubber

Resetting Old Rubber

144-O	1"
144-P	1 1/4"
144-Q	1 1/2"
144-R	2"
144-S	2 1/2"



Wheel Repairs

To replace spokes and felloes on old wheels, it is impossible to have a set price for all wheels. Some old wheels may not have standard spokes and felloes, so we may have to dress them from our stock to match the old. Then some wheels may not have been used for years, and the tire bolts may be rusted and hard to remove, and require some labor. Or wheels may be dished the wrong way, or the hubs may have to be re-riveted. Below are prices for replacing wood on an average standard wheel.

Replace Spokes

Sarven Spokes

		X - 1 spoke per 1 section	O- more spokes, same section
145-A	1" x 1 1/8" x 1 1/4"	X	
145-B	1" x 1 1/8" x 1 1/4"		O
145-C	1 3/8"	X	
145-D	1 3/8"		O
145-E	1 1/2"	X	
145-F	1 1/2"		O
145-G	1 5/8"	X	
145-H	1 5/8"		O
145-I	1 3/4"	X	
145-J	1 3/4"		O
145-K	1 7/8"	X	
145-L	1 7/8"		O
145-M	2"	X	
145-N	2"		O
145-O	2 1/4"	X	
145-P	2 1/4"		O
145-Q	2 1/2"	X	
145-R	2 1/2"		O

Offset & Wagon Spokes

		X - 1 spoke per 1 section felloe	O - additional spokes, same section
145-S	1", 1 1/8", 1 1/4"	X	
145-T	1", 1 1/8", 1 1/4"		O
145-U	1 3/8"	X	
145-V	1 3/8"		O
145-W	1 1/2"	X	
145-X	1 1/2"		O
145-Y	1 5/8"	X	
145-Z	1 5/8"		O
146-A	1 3/4"	X	
146-B	1 3/4"		O
146-C	1 7/8"	X	
146-D	1 7/8"		O
146-E	2"	X	
146-F	2"		O
146-G	2 1/4"	X	
146-H	2 1/4"		O
146-I	2 1/2"	X	
146-J	2 1/2"		O

Cont'd on next page



Replace Felloes

	Prices per ½ section	X -24"-44"	O - 46"-48"	* - 50"-52"
146-K	7/8, 1", 1 1/8, 1 1/4	X		
146-L	7/8, 1", 1 1/8, 1 1/4		O	
146-M	7/8, 1", 1 1/8, 1 1/4			*
146-N	1 1/2"	X		
146-O	1 1/2"		O	
146-P	1 1/2"			*
146-Q	2"	X		
146-R	2"		O	
146-S	2"			*
146-T	2 1/2"	X		
146-U	2 1/2"		O	
146-V	2 1/2"			*
146-W	3"	X		
146-X	3"		O	
146-Y	3"			*

In addition to the prices for replacing spokes and felloes, you must also add the price of resetting the tire.

Example:

Replace 2, 1 1/8" spokes...\$12.00 + \$6.00 = \$21.00
 Replace 1 section 1" felloe.....\$25.00
 Reset 1" steel tire.....\$40.00
 Total.....\$86.00

Sawed Felloes

Sawed felloes are not a stock item, so are custom made only. We prefer a pattern, but we can make our own if no pattern is available. Following are standard sizes and prices, any other sizes will be charged accordingly or will quote on application.

147-A	2" x 2" - 30" to 44"
147-B	2" x 2 1/4" - 30" to 44"
147-C	2 1/4" x 2 1/4" - 30" to 44"
147-D	2 1/2" x 2 1/2" - 30" to 44"
147-E	3" x 2 1/4" - 30" to 44"
147-F	3 1/2" x 2 1/2" - 30" to 44"

Finished Sawed Felloes

We will bore and round sawed felloes, but we must know the tenon size of the spokes.

Add extra for boring & rounding.....\$10.00

Abrasives

148-A	5" disc 80 grit 100 count
148-B	5" disc 150 grit 100 count
148-C	5" disc 220 grit 100 count
148-D	5" disc 320 grit 100 count
148-E	Scuff pads 6x9 ea.
148-F	7" disc 36 grit
148-G	6 x 89 Wood sanding belt 60 grit
148-I	2 1/2" x 60 sanding belt for metal 36 grit



Cable Brakes

Cable Brakes 1"

149-A	8" Cable brakes set, for 1" axle, clamp on
149-B	8" Cable brakes set, for 1" axle, clamp on, black
149-C	8" Cable brakes set, for 1" axle, taper lock
149-D	8" Cable brakes set, for 1" axle, taper lock, black
149-E	8" Cable brakes set, for 1" axle, clamp on, w/ locking pedal
149-F	8" Cable brakes set, for 1" axle, taper lock, w/ locking pedal

Cable Brakes 1 1/8"

149-H	8" x 1 1/8" Cable brakes set, clamp on
149-I	8" x 1 1/8" Cable brakes set, clamp on, black
149-J	8" x 1 1/8" Cable brakes set, taper lock
149-K	8" x 1 1/8" Cable brakes set, taper lock, black
149-L	8" x 1 1/8" Cable brakes set, clamp on, w/ locking pedal
149-M	8" x 1" Cable brakes set, taper lock, w/ locking pedal

Cable Brake Parts

149-P	50" cable
149-Q	54" cable
149-R	60" cable
149-S	Cable Equalizer #5
149-T	Cable Hook Up, brass
149-U	Hook up cover, screw only for (new style)
149-V	Hook up cover, flat (new style)
149-W	Hook up cover, round (old style)

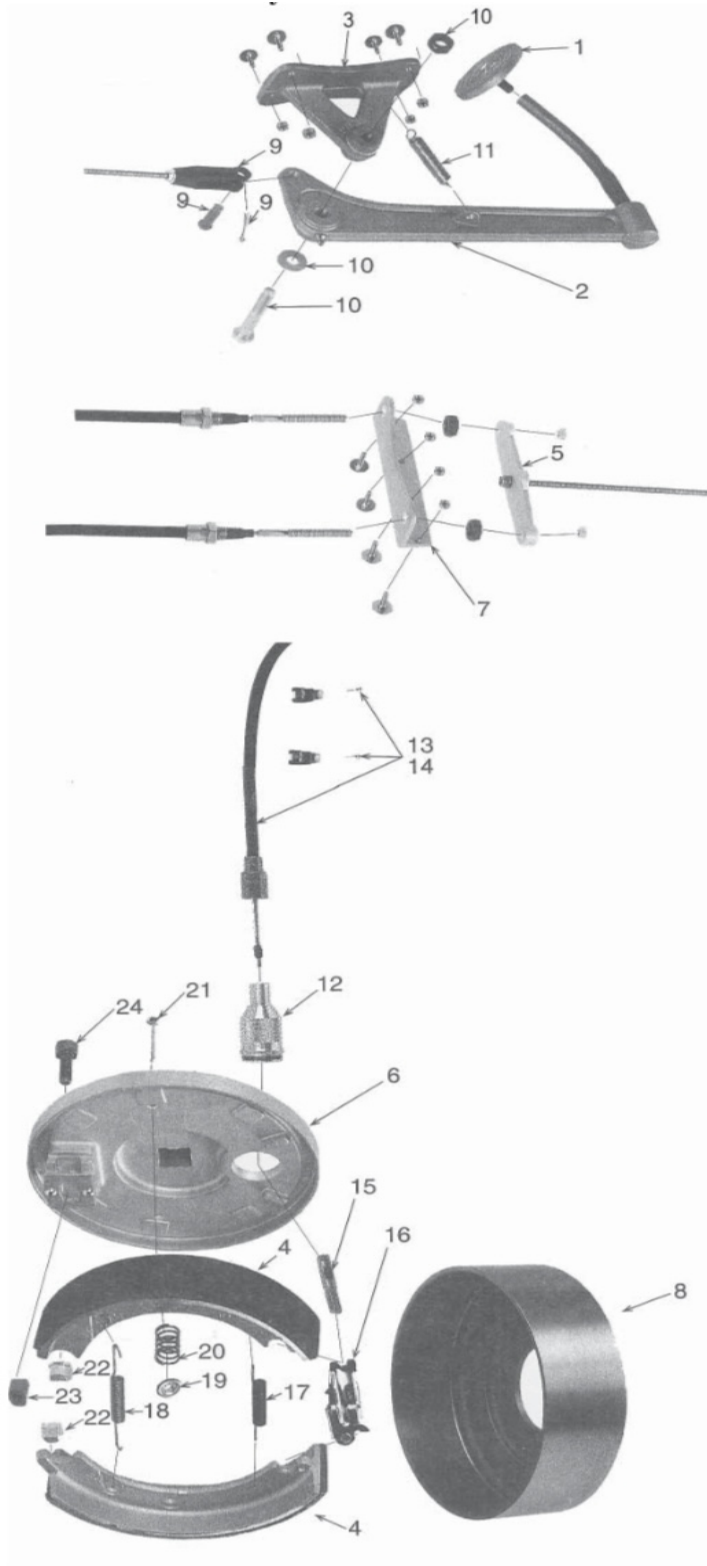
Cable Brake Parts Cont'd

150-A	Brake Drum, 8"
150-B	Backer Plate complete
150-C	Backer Plate complete, black
150-D	Baker Plate Bare, less shoe and hub
150-E	Baker Plate Bare, less shoe and hub, black
150-F	Backer Plate w/ shoe, less hub
150-G	Backer Plate w/ shoe, less hub, black
150-H	Baker Plate Bare, less shoe w/ hub, black
150-I	Baker Plate Bare, less shoe w/ hub, black
150-J	Baker Plate complete, taper lock
150-K	Baker Plate complete, taper lock, black
150-L	Baker Plate bare, taper lock
150-M	Baker Plate bare, taper lock, black
150-N	Axle Clamp, split hub
150-O	Pedal Arm
150-P	Pedal Arm w/ lock
150-Q	Pedal Bracket
150-R	Brake Shoe 904
150-S	Brake Shoe Bottom Spring
150-T	Brake Shoe Top Spring
150-U	Spread Lever
150-V	Wedge
150-W	Wedge Block
150-X	Wedge Bolt

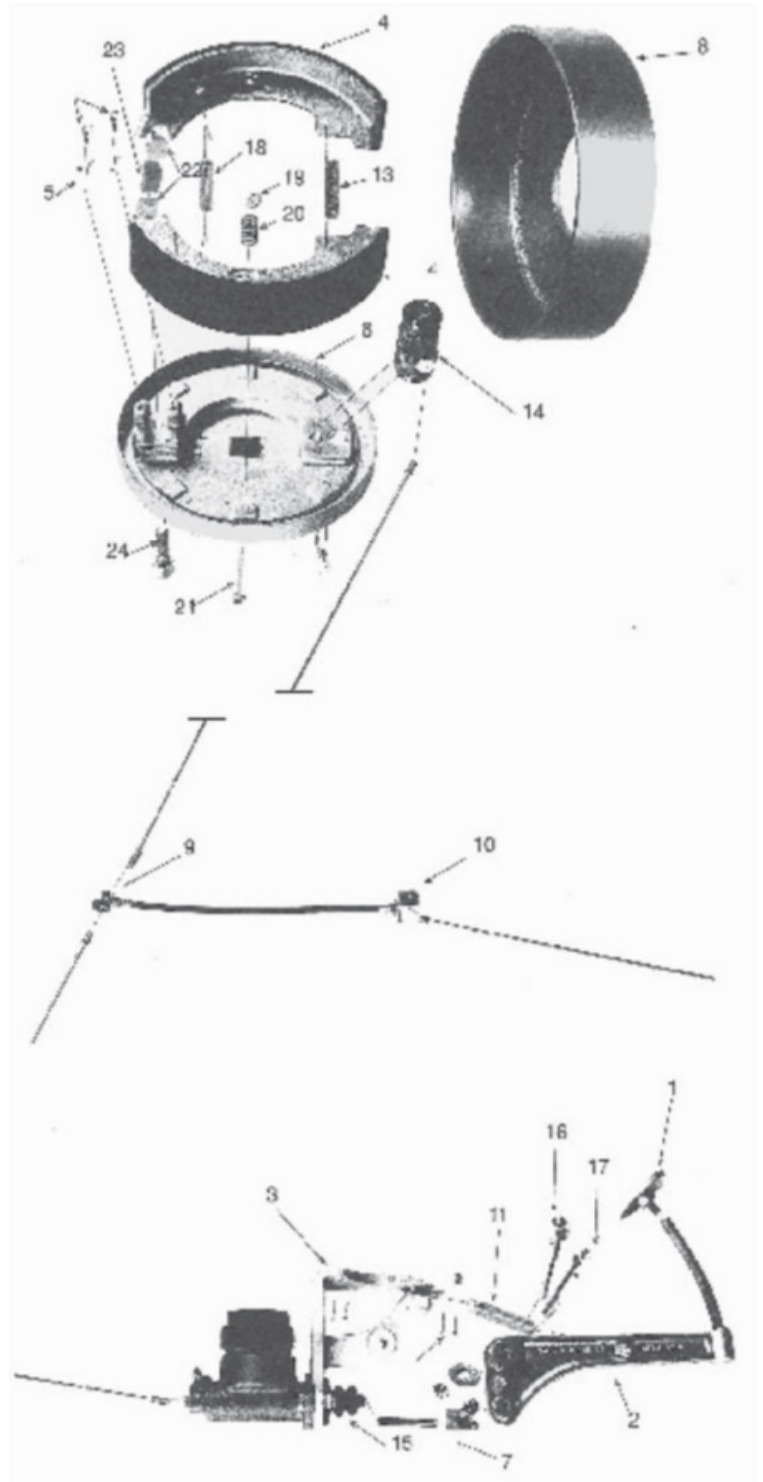


Hydraulic Brakes

Cable Brake



Hydraulic Brake





Hydraulic Drum Brakes

The hydraulic drum brakes are available in three drum sizes. 8", 10" & 12". The 8" are used with 1" & 1 1/8" axles. The 10" are used with 1 1/4" & 1 1/2" axles. The 12" are used with 2", 2 1/4" & 2 1/2" axles.

- The 8" brakes have an aluminum hub which clamps on the axle.
- The 10" have an aluminum hub on the backer plate, which slides on the axle, and is tightened with a set screw.
- The 12" brakes have a steel hub which clamps on the axle.

A complete brake set includes drums, backer plate with shoes & hub, master cylinder & mounting bracket & pedal arm, hose & brackets & 3 pieces of tubing with nuts, & one can fluid.

10" Hydraulics Brake

151-A	10" Complete Set for 1 1/4" axle
151-B	10" Complete Set for 1 1/2" axle
151-C	10" Center Hub for 1 1/4" axle
151-D	10" Center Hub for 1 1/2" axle
151-E	10" Complete Backer Plate

10" Hydraulics Brake Parts

151-F	10" Drum
151-G	10" Drums & Backer Plates, set of 2
151-H	10" Brake Shoe Cylinder
151-I	10" Brake Shoe Cylinder, single position rebuilt kit
151-J	10" Brake Shoe Cylinder, rod only
151-K	10" Brake Shoes, per pair
151-L	10" Brake top Shoe Cylinder

10" & 12" Hydraulics Brake Parts

151-M	10" or 12" Bottom Shoe Spring
151-N	10" or 12" Hold Down Pin
151-O	10" or 12" Hold Down Spring & Cup
151-P	10" or 12" Shoe Wing Washer
151-Q	10" or 12" Adjusting Screw

12" Hydraulics Brake

151-S	12" Complete Set for 2 1/4" axle
151-T	12" Complete Set for 2 1/2" axle
151-R	12" Complete Set for 2" axle

12" Hydraulics Brake Parts

151-U	12" Complete Backer Plate
151-V	12" Drum
151-W	12" Drums & Backer Plates, set of 2
151-X	12" Hub for Backr Plate
151-Y	12" Shoe Cylinder
151-z	12" Brake Shoes, per pair

8" Hydraulics Brake

152-A	8" brakes set, for 1" axle, clamp on
152-B	8" brakes set, for 1" axle, clamp on, black
152-C	8" brakes set, for 1" axle, taper lock
152-D	8" brakes set, for 1" axle, taper lock, black
152-E	8" brakes set, for 1" axle, clamp on, w/ locking pedal
152-F	8" brakes set, for 1" axle, taper lock, w/ locking pedal

Hydraulic Brake Parts

152-J	Master Cylinder
152-K	Master Cylinder & Pedal Ass. less hose
152-L	Master Cylinder & Pedal Assembly
152-M	Master Cylinder Boot
152-N	Master Cylinder Cap
152-O	Master Cylinder Cap, for aluminum cylinder
152-P	Master Cylinder Cap Gasket
152-Q	Master Cylinder Rebuilt Kit
152-R	Master Cylinder replace cup only
152-S	Master Cylinder w/ bracket
152-T	Brake Parts including pedal pad, bolt, & rod
152-U	Pedal Arm
152-V	Pedal Arm Extension, 3"
152-W	Pedal Arm Extension, 1 1/2 "
152-X	Pedal Arm Spring
152-Y	Pedal Arm Bracket
152-Z	Pedal Pad



Hydraulic Brake Parts cont'd

153-A	Brake Shoe 804
153-B	Brake Shoe 704, SMS 7"
153-C	Brake Shoe Cylinder Stainless
153-D	Brake Shoe Cylinder Aluminum
153-E	Brake Shoe CylinderPiston
153-F	Brake Shoe Cylinder Piston Lube, 4 oz.
153-G	Brake Shoe Cylinder Rebuilt Kit
153-H	Brake Shoe Cylinder stainless steel bleeder screws
153-I	Hold Down Cup
153-J	Hold Down Pins
153-K	Hold Down Springs
153-L	Brake Shoe Bottom Spring
153-M	Brake Shoe Bottom Spring 7"
153-N	Brake Shoe Top Spring
153-O	Brake Shoe Top Spring 7"
153-P	Shoe Pusher Tool
153-Q	Bleeder Tool
153-R	Hose w/ fitting
153-S	Hose w/ Fitting, less tee
153-T	Brake Line 20"
153-U	Brake Line 30"
153-V	Brake Line 40"
153-W	Brake Line 50"
153-X	Brake Line 60"
153-Y	Brake Line 72"
153-Z	Brake Line Clamps w/ screws
154-A	Brake Drum 8"
154-B	Brake Backer Plate complete
154-C	Brake Backer Plate, black
154-D	Brake Backer Plate, bare, less shoe & hub

154-E	Brake Backer Plate, bare, less shoe & hub, black
154-F	Brake Backer Plate, w/ shoe less hub
154-G	Brake Backer Plate, w/ shoe less hub, black
154-H	Brake Backer Plate, less shoe with hub
154-I	Brake Backer Plate, less shoe with hub, black
154-J	Brake Backer Plate, complete, taper lock
154-K	Brake Backer Plate, complete, taper lock, black
154-L	Brake Backer Plate, bare, taper lock
154-M	Brake Backer Plate, bare, taper lock, black
154-N	Axle Clamp, split hub
154-O	Axle Clamp, axle plate, taper lock
154-P	Pedal Bolt w/ grease fitting
154-Q	Self Tap Bolt for clamp on backer plates
154-R	Taper Lock axle clamp Bolts only
154-S	Wheel cylinder bolts only

Brake Fluid

154-W	Dot 3, pint
154-X	Dot 3, quart
154-Y	Dot 3, gallon
154-Z	Dot 5, pint

Hydraulic Brake Parts cont'd

155-A	Brake Lok
155-B	Brass Valve, parking valve
155-C	Brass Adapter
155-D	Brass PLug
155-E	Brass Tee
155-F	Brass Tee bracket only
155-G	Brass Tee w/ bracket
155-H	Brass Union
155-J	Knuckle Rod only w/ nuts
155-K	Knuckle w/ Rod



H-P Compression Brake Fittings

155-L	H-P Val Compression, straight fit for master cylinder, 1/8" NPT
155-M	H-P Val Compression Elbow 1/8" brass NPT
155-N	H-P Val Compression nut & sleeve
155-O	H-P Val Compression, straight fitting for wheel cylinder
155-P	H-P Val Compression Tee
155-Q	H-P Val Line, black nylon tubing , per foot

Manual Brakes

155-S	Manual Set, hand lever
155-T	Manual Set, foot,, #41, non locking pedal
155-U	Manual Set, foot, #6, locking pedal
155-V	Manual Set, foot, #8, locking pedal
155-X	Adjusting bar only w/ set screws
155-Y	Brake Blocks only

Disc Brakes

156-A	Fits CMS hubs, no pedal included
156-B	Fits CMS hubs, w/ disc covers, no pedal included
156-C	Fits regular hub, no pedal included
156-D	Fits regular hubs, w/ disc covers, no pedal included

Disc Brake Parts

156-E	Disc Covers, for regular axles, ea.
156-F	Disc Covers, for torsion axles, ea.
156-G	Disc only, for CMS hub, ea.
156-H	Disc only, for regular hub, ea.
156-I	Disc Mounts, for wood wheels, ea.
156-J	Axle Bracket, for caliper & cover, ea.
156-K	Axle Bracket, for caliper only, ea.
156-L	Wheel Caliper
156-R	3/16" plastic brake tubing, per foot

Disc Brake Parts cont'd

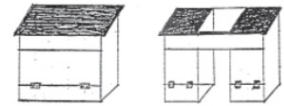
156-S	5 5/16" x 3/4" socket, hd
156-T	6mm x 3/4" socket, hd , stainless steel
156-U	Compression Elbow
156-V	Compression Nut
156-W	Compression Straight fitting w/ nut
156-X	Compression Tee

Boot Lid

Boot lids are made with exterior plywood, reinforced with steel, and top is padded with 1/4" foam rubber.

157-A	Boot lid 30" x 15 3/4" w/ foam - single buggy size
157-B	Boot lid 30" x 15" w/ foam - surrey size
157-C	Boot lid, covered w/ material, 30" x 15 3/4"
157-D	Boot lid, covered w/ material, 30" x 15"

We will custom build other styles to your specifications. Prices on application.



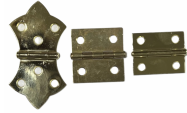
Dash Boxes

These wooden dash boxes mount on the dash of Amish buggies. No. 157-F is 14" wide, 14" high, 3" deep w/door in front & lid on top. No. 157-F is 24" wide, 14" high, 3" deep w/7 3/4" opening in the center for a heater.

157-G	Reg. dash box
157-H	Reg. dash box painted
157-I	Reg dash box painted w/knobs & hinges
157-J	Heater style dash box
157-K	Heater style dash box painted
157-L	Heater style dash box painted w/knobs & hinges
157-M	Heater style dash box (black poly)
157-N	Heater style dash box (black poly) with top lids and hardware



Dash Box Hardware & Hinges



157-O	Dash box knob Bright brass
157-OA	Dash box knob Antique brass
157-OC	Dash box knob Burnt copper
157-ON	Dash box knob Brushed nickel
157-PA	Self closing hinge Antique brass
157-PC	Self closing hinge Burnt copper
157-PN	Self closing hinge Brushed nickel
157-Q	Decor hinge Bright brass
157-R	Decor hinge Antique brass
157-S	Butt hinge 1 1/8 x 1 1/2 Bright brass
157-T	Butt hinge 1 1/2 x 1 1/2 Bright brass
157-U	Butt hinge 2 x 2 Black - (Front Hinge)
157-W	Butt hinge continuous 1 x 1 x 6' Nickel
157-X	T-Hinge 6" Black H.D.(end gate or barn door)

Buggy Bodies

We custom build buggy bodies to your specifications. The following pages are some of the style bodies we build, which are mostly for our Amish style buggies. The buggies are framed with hardwood, all joints are glued, and points of stress are reinforced with steel. The sides are made from MDO which is a marine plywood that makes a good finish. It is laminated with a countertop laminate on the outside and will last for many years of service. We put metal corners on all bodies and metal edges on the top edges of sides.



Queen Body Box

Price includes steps and boot lid.

158-A	Std. queen buggy 28 X 68 12" H 10" boot
158-B	Queen size - fiberglass box
158-C	Queen size - foamcore box

Single Body Box

158-D	Std. single buggy, 28 X 58 , 12" H 10" boot
158-E	Single buggy - fiberglass box
158-F	Single buggy - foamcore box

Surrey Body



Prices with standard front step and double rear step.

158-G	Surrey body, 28 x 76 x 12"H 20 degree angle
158-H	Surrey body w/ boot lid 28 x 96 10" boot
158-I	Fiberglass surrey body
158-J	Foamcore surrey body
158-K	Slanted cut under surrey box - wood
158-L	Slanted surrey box, wood

Spring Wagon Body Box

158-M	Spring Wagon box w/ endgate
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Indiana Amish Style Buggy

Seat

Dimensions: 19" long, 38" wide.

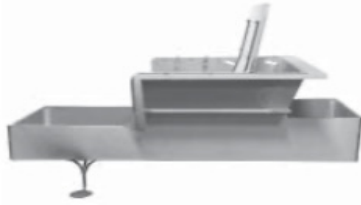
Bottom is made of hardwood, the sides are made of sign board. Corners are braced, ends are reinforced with steel.

Can be ordered with or without cushion.



159-A	Amish seat for single buggy (or surrey rear)
159-B	With cushion
159-C	Surrey seat w/ fold down baby bed
159-D	Surrey seat w/ fold down baby bed w/cushion

We will custom build to your specifications.



Queen Size Seat

Dimensions: 29" long, 38" wide

159-E	Queen size seat (shown on a queen body)
159-F	Queen seat w/cushion



Cushions

Our cushions are made with hardwood frames, No-sag springs, padded with 3 inches of 2860 foam rubber.

159-H	Cushion w/ springs & foam
159-I	Cushion pull out center, w/ springs & foam
159-J	Cushion frame w/springs less foam
159-K	Cushion frame pull out center, w/springs less foam

Surrey Seat

For runabouts & surreys

We will build this style seat to your specifications. Available in any length & width. Can also be ordered with brackets for canopy top or folding top. Prices do not include paint, upholstery or cushion.



160-A	Wood seat
160-B	With brackets for canopy top
160-C	With brackets for folding top

Open Back Seats

State width and length when ordering.

Price does not include paint & upholstery.

160-D	Open back seat
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Fiberglass Auto Seat

Seat is available in two sizes. 36" x 18" & 46" x 18". The 36" has a 4-panel back and the 46" has a 5-panel back.

Prices do not include cushions.

160-E	36" Auto seat
160-F	46" Auto seat
160-G	40" Auto seat



Seat Fastener

Seat fasteners priced per pair. One pair is required per seat.. Made of zinc alloy.

161-A	Seat fasteners
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Seat Corner Braces

Prices do not include holes drilled. Braces made of zinc alloy.

161-B	Seat corner brace, 2¼ x 4½, 117° angle alum zinc
161-C	¾" x 3" x 3" corner brace steel - holes drilled



Seat Irons

These irons are for our Amish style seats.

3/16 x 1 steel, 20 degree angle, holes drilled. One set, 2 each

162-A	Amish seat iron set
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Lazy Back Irons



162-B	Rigid lazy back irons, ¾ x 1¼ x 16 steel, bent & drilled
162-BA	Rigid lazy back irons for surrey front seat



Seat Irons for Canopy Top



These irons are for auto seats.
For other seats we must have detailed dimensions.

162-C	Canopy top seat irons
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Folding Top Seat Irons

Unless we have the seats to make the irons, we must have detailed dimensions to make the irons.

162-D	Irons for 3 & 4 bow tops
162-E	Irons for surrey extension top

Seat Irons

162-F	Single buggy seat brace-3/16 x 1 x 6 flat
162-G	Surrey front seat brace-1/4 x 3/4 x 8 L-shape



Seat Irons

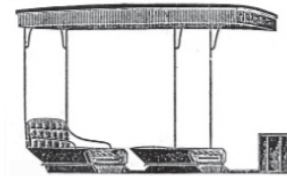
162-H	Steel seat armrest - 3/8" rod per pr.
162-HA	Black Steel seat armrest - 3/8" rod per pr.
162-I	Steel seat armrest - w/flat for padded armrest - 3/8" rod per pr.
162-J	Lazy back iron for open back seat 5/16 x 1 x 12 flat
162-K	Lazy back iron for open back seat- 1/2 x 12 round rod

Canopy Top Standards

Our standard length for top standards is 34". Will make other lengths to your spec. Mounting bolt is 1/2". Includes nuts.

163-A	Canopy top standards w/1 brace ea.
163-B	Canopy top standards w/2 braces ea.
163-C	Canopy top standards w/2 braces Stainless steel w/ a sliding set slot to lower tops. ea.

Canopy Tops



We will build canopy tops to your specifications. The prices are for an average two seat carriage. Does not include the standards. A finished top includes inside lining, top cover, fringe & trim.

163-E	Canopy top frame (wood only)
163-F	Finished top

Body & Seat for Amish Top



This buggy body & seat assembled, ready to build the top. Includes body, seat with lazy back, cushion with padding, boot lid with padding, steps, seat bolts, & backer for curtains. Available unpainted or painted.

164-A	Single buggy body & seat w/10" sides in boot
164-B	164-A Painted
164-C	Queen buggy body & seat w/10" sides in boot
164-D	164-C Painted

Prices do not include hangers. The above prices reflect on our standard size bodies and seats. Any variations will be charged accordingly, or will quote prices on request.

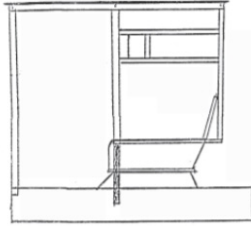
Outside Metal Corners

16 gauge metal, for buggy box

164-E	7/8 x 7/8 x 48"
164-F	1/2 x 7/8 x 48"
164-I	1/2 x 7/8 x 8" w/ holes drilled
164-J	1/2 x 7/8 x 10" w/ holes drilled
164-K	1/2 x 7/8 x 12" w/ holes drilled



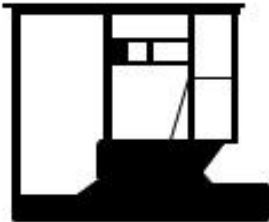
Amish Single Top Kits



Side view, not to scale. This unit is available in kits or assembled, painted or unpainted. Unit includes; Body, seat, padded cushion, boot lid, side panels, posts, rafters, top rails, dash cross bar, dash irons, aluminum dash, foam rubber for lazy back & side panels, seat bolts & split frameless front frame. Prices are for framing of slide up doors. Door tracks are included. The door frames must be ordered separately.

165-A	Top kit for slide-up doors
165-B	Top assembled
165-C	Top assembled & painted

Amish Queen Top Kit



This unit is also available in kits or assembled, painted or unpainted. Unit includes; Body, seat, padded cushion, boot lid, side panels, posts, rafters, top rails, dash cross bar, dash irons, aluminum dash, foam rubber for lazy back & side panels, seat bolts & split frameless front frame. Prices are for framing of slide up doors. Door tracks are for 3 slide up doors included. The door frames must be ordered separately.

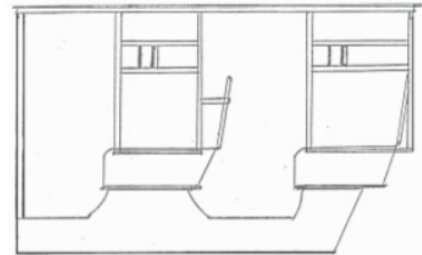
165-D	Queen top kit for slide up doors
165-E	Assembled
165-F	Assembled & painted

Surrey Body & Seats (For Amish Tops)

This surrey body & seats are assembled, ready to build the top. Unit includes body & seats, cushions with padding, steps, roller wear irons, seat bolts & backer for curtains. Body hangers must be ordered separately. Prices reflect our standard body & seats, any variations will be charged accordingly.

166-A	Surrey body & seats
166-B	Surrey body & seats, w/ baby bed
166-C	Surrey body & seats, w/baby bed & boot lid
166-D	Surrey body & seats, w/ boot lid
166-E	Painted body & seats

Amish Surrey Top Buggy



Not drawn to scale. This unit is available in kits or assembled, painted or unpainted. Included as a unit: Body & seats assembled with curtain backers, padded cushions, foam rubber for backs & side panels, top posts, top rails, top rafters, dash cross bar, aluminum dash, frameless fronts, window frames, front hanger, seat bolts & iron braces for dash.

Units for slide-up doors and standard box. Prices include 2 sets of slide-up tracks. Doors must be ordered separately** For a baby bed or boot on box extra charges will be added.	
166-F	Surrey Top kit**
166-G	Surrey Top assembled**
166-H	Surrey Top assembled & painted**

Front Frames

Frame is made of 1" x 2 1/2" poplar wood. Joints are lapped, glued & screwed. Frames for safety glass are rabbited. All frames include a water lip.

166-K	Split safety glass front frame
166-L	Painted split front frame
166-M	Aluminum strip for split fronts



Frameless Fronts

Frameless fronts are a finished product ready to install, and made with a scratch resistant plexi-glass or a scratch resistant lexan. Our standard opening sizes are 23 7/8" x 44" (bottom) 44 1/2" (top). Other sizes can be ordered to your specs.

166-N	Plexi glass front frame standard size
166-O	Plexi glass fronts 2" wider than standard
166-P	Plexi glass fronts 4" wider than standard
166-Q	Lexan glass front frame standard size
166-R	Lexan glass front frame custom size
166-S	Black Poly frame w/thermal glass standard size
166-T	Black Poly frame w/thermal glass custom size

Front Drip Edge

167-A	1 x 1 1/4 x 46" poplar drip edge
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Frame Parts

167-B	Front frame hanger, 13/16" x 1 48", white ash
167-C	Dash cross bar, 15/16" x 3 x 46", white ash
167-D	Top post, 1 x 1 1/4 x 34", white ash
167-E	Top post w/1 corner brace 34"
167-F	Top post w/2 corner braces 34"
167-G	1 1/2 x 1 1/4 Front post for slide doors 34 7/8"



Curtain Backers

167-H	Dash curtain backer
167-I	Seat curtain backer
167-J	Door Stop

Steel Dash Braces

168-A	Dash brace, 1/4 x 3/4 x 28" steel
168-B	Dash brace formed & drilled

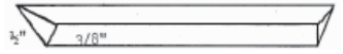
Wood Window Frames

We can custom build to your sizes Please specify with lip or without.



168-C	Window frames, Glass size is 8 1/2 x 7 1/4 Overall length is 24", poplar wood
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Rubber Window Molding



Rubber window molding is very flexible. Can be nailed on or glued on.

168-D	Rubber window trim 1/2" x 3/8", cut per ft.
168-E	Rubber window trim 1/2" x 3/8", 84' roll

Black Plastic Window Garnish

Trim for panel lined interiors, fits wood window frames

168-F	7" x 8 1/4", inside trim
168-G	7" x 7", inside trim
168-H	8" x 8", inside trim
168-I	9" x 9", 2 pc inside and outside trim, w/ thermal glass

Side Rails

Made of poplar wood, avg. size 1 x 2". Can make other sizes.

169-A	Single top frame rails, 54"
169-B	Queen top frame rails, 64"
169-C	Surrey top frame rails, 94"

Rafters for Top

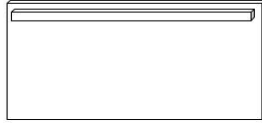
Made of poplar.

169-E	Standard rafter, 1 x 1 1/2" x 46"
169-F	Slide up door rafter, 1 x 2" x 46"
169-G	Heavy front rafter, 1 1/2 x 2" x 46"



Side Panels

Side panels are for reinforcement, and fastening upholstery.



169-J	Side panels, 14 x 24
169-K	Side panels, 14 x 18
169-K	Full length side panels, 34 x 18
169-L	Full length side panels, 34 x 24
169-M	Queen full length, 34 x 34
169-N	Rear panel, 12 x 22
169-O	Queen rear panel, 12 x 34

Slide-up Door Channel

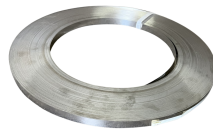


ABS plastic molded to allow easy sliding of the doors. The tracks are formed for the corner. These are 48" overall length, 1" depth & 1/2" wide. They come in a black finish, no painting required. Avail. in sets or individually. Set includes 2 lefts & 2 rights in radius.

170-A	Slide-up overhead track 4 pc per set
170-B	Slide-up overhead track ea,

Spring Steel

Stainless steel. For stiffeners on the slide up door frames. .0250 x .700 We stock it in rolls, and will cut to desired length.



170-C	Spring steel, per foot
170-D	per 100'

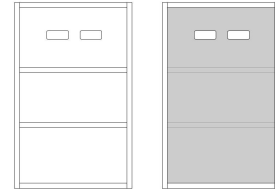


Door Handles

4" hole centers

170-E	Slide-up door handles, black
170-F	Outside aluminum angle handle, black
170-G	Brass door handle, 4 hole
170-H	Slide up door catch, black powder coated
170-I	Fold Down Baby Bed Handle only, Black

Slide-up Doors



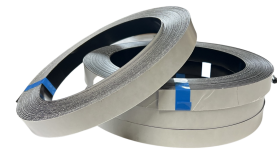
Our door frames use 1/8 x 3/4 steel for cross bars on top 4 bars, bottom bar is 1/8 x 1. Side stiffeners are 3/4" spring stainless steel. These are assembled with 3/16" pop rivets. We will also cover the doors with your choice material. When we cover doors, we laminate material on both sides of the frame. Inside material can be upholstery, same as your seat material. Be sure and specify width & length of doors.

171-A	48" Slide-up door frame only
171-C	48", covered w/automotive upholstery
171-D	48", covered w/your upholstery
171-E	48", covered w/your vinyl & upholstery
171-F	32", Slide up door frame only
171-H	32", covered w/automotive upholstery
171-I	32", covered w/your upholstery
171-J	32", covered w/your vinyl & upholstery
171-K	Curtain light installed in doors

Price includes handles. Does not include curtain lights.

Plastic Door Edging

.031, black, w/adhesive backing. We use this edging on all our slide-up doors. It protects the material, and lets the doors slide easier. Very tough & flexible. 100' per roll



171-M	1" Plastic edge, 100' roll
171-N	1 1/8" Plastic edge, 100' roll
171-O	1 1/4" Plastic edge, 100' roll
171-P	2" Plastic edge, 100' roll



Aluminum Dashes

We use aluminum for our dashes on Amish top buggies. It is .100 thickness and we have it in 4' x 10' sheets. We will cut it to the desired size. This makes a sturdy front construction, and will not weather or rot. Strong enough that a horse will not kick a hole in it.

Aluminum

172-A	4' x 10' full sheet
172-B	26 x 48 dash
172-C	25 x 48 dash
172-D	24 x 48 dash
172-E	23 ¼ x 48 dash
172-F	26 x 50 dash
172-G	25 x 50 dash
172-H	24 x 50 dash
172-I	26 x 52 dash
172-J	25 x 52 dash
172-K	24 x 52 dash
172-L	25 ½ x 52 ¼ dash
172-M	4 x 48
172-N	3½ x 48
172-O	3 x 48
172-P	2 ½ x 48
172-Q	2 ¾ x 48
172-R	2 ¼ x 48
172-S	2 ⅞ x 48
172-T	2 x 48
172-U	1 ¾ x 48
172-V	1 ½ x 48
172-W	1 ⅜ x 48
172-X	1 ¼ x 48
172-Y	1 x 48
172-Z	½ x 48
173-A	2 x 32
173-B	½ x 28

Aluminum cont'd

173-C	3 x 23 ¾
173-D	2 ¾ x 23 ¾
173-E	2 ¼ x 23 ¾
173-F	2 ¾ x 23 ¾
173-G	2 ⅝ tapered to 2 ⅞ x 23 ¾
173-H	5 x 23 ¾
173-I	½ x 1 flat 16' bars
173-J	⅝ x 1 alum angle 12'
173-K	⅝ x 1 alum angle 46 ½"
173-L	⅝ x 1 alum angle 32"
173-M	⅝ x 1 alum angle 48"
173-N	½ x 1 x ⅞ x 48" aluminum angle
173-O	½ x 1 x ⅞ x 16' aluminum angle
173-P	¾ x ¾ x ⅞ x 16' aluminum angle

Black Powder Coated Aluminum

Holes drilled on flats only

173-R	2 ⅝ x 48 Alum strips
173-S	2 x 48 Alum strips
173-T	2 x 32 Alum strips
173-U	⅝ x 1 Alum angle 48"
173-V	⅝ x 1 Alum angle 32"
173-W	2 ½" x 48" alum strips
173-X	2 ¼" x 48" Alum strips
173-Y	2 ¼" x 32" Alum strips

Complete Front End

Fits all our standard size buggy boxes. Includes assembled wood frame, aluminum dash & upper strips ready to mount on a buggy.

173-Z	Complete assembled dash
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AC Plywood

174-A	1/4" x 4 x 8
174-B	3/8" x 4 x 8
174-C	1/2" x 4 x 8
174-D	3/4" x 4 x 8

MDO Plywood

Marine board that we use mostly on buggy bodies & seats. Has a luan underlay & will give a smooth finish & will weather better.

174-E	1/2" MDO board, good 2-sides
174-F	3/4" MDO board, good 1-side
174-G	3/4" MDO board, good 2-sides
174-H	3/8" MDO board, good 2-sides

Laminate Sheets

We use this on our buggy bodies, the same material as used on countertops. Sand this before painting.

174-I	Laminate, 1/16" x 4 x 8
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1/4" Paneling (Seconds)

Has a finished side. We use these in our panel lined buggies and cover with foam & upholstery. We only stock this in 1/4" x 4 x 8.

174-L	1/4" Paneling
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Polycarbonate (Lexan)

This plastic is a very tough flexible material. We have used it on dashes, and it makes a very smooth finish. 1/4" thick

175-A	4' x 8', Lexan sheet, Clear
175-B	24" X 48", Lexan dash, Clear
175-C	2 3/8" X 48", Lexan strip, Clear
175-D	4' x 8', Lexan sheet, Black high gloss
175-E	24" X 48", Lexan dash, Black high gloss

Safety Glass

Safety glass is double laminated glass. We only stock it in our standard sizes, 18 3/4" square for split front. Clear or shaded. You can order other sizes. Will not ship out.

175-F	18 3/4" square clear safety glass
175-G	18 3/4" square, 6" shaded safety glass

Double Strength Glass

175-H	7 1/4 x 8 1/2 for side windows
175-I	7 1/4 x 6 for side windows
175-J	7 3/4 x 5 3/4 for side window

Plexiglass

Stocked in 1/8" x 4' x 8' sheets. Will cut to size.

175-M	4' x 8' sheet
175-N	2' x 4' sheet



Sealant

176-A	100% silicone sealant, black only - used on our glass and rubber window trim
176-B	Caulking Black LS250B We use this adhesive to glue our wooden body, dash, & seats
176-C	Caulking Black Titebond Strong adhesive for wood and alum dashes

Latches

176-F	Front latch, sash lock, chrome
176-G	Front latch cam, sash lock, chrome
176-H	Front latch sash lock, brass
176-I	Front latch cam, sash lock, brass



Front Catch

The 177-A front catch set is made of 1/8 x 3/4 steel. Handle attaches to the bottom of the front frame. When the front is closed, lift the handle to release, and then swing front up, and the handle will hook on an overhead catch.

177-A	Front catch set, black
177-B	Roller front catch
177-C	Side mount front catch set, black
177-AA	Bottom piece
177-AB	Handle piece
177-AC	Top piece



Front Catch For Magnet

177-D	Front Handle only, no offset Black
177-E	Front Handle only, 3/8" offset, Black
177-F	Front Handle only, 1/2" offset, Black



Magnets

177-G	3/4" magnet in cup
177-H	1" magnet in cup
177-I	1/2" magnet in cup
177-J	5/8" magnet in cup
177-L	3/8" x 3/16" magnet
177-M	3/8" x 1/16" magnet

Foam Rubber

This seating foam rubber comes in a firm high 2770 density. We stock the following sizes of pre-cut foam.

177-N	1 x 28 x 45 firm (#2770) cushion cover
177-O	1 x 28 x 49 firm (#2770) cushion cover
177-P	2 x 17 x 35 1/2 firm (#2770) cushion
177-Q	2 x 18 x 35 1/2 firm (#2770) cushion
177-R	2 x 18 x 39 1/2 firm (#2770) cushion
177-S	1 x 6 x 35 1/2 firm (2770) cushion riser
177-T	1 x 6 x 39 1/2 firm (2770) cushion riser

	Foam rubber continued
177-U	3 to 4 1/2 (wedge) x 18 x 36 firm (2770) cushion
177-V	4 x 18 x 40 firm (#2770) cushion
177-W	3 x 19 x 37 firm (2770) cushion
177-X	2 x 20 x 36 firm (2770) fold down bed
177-Y	2 x 20 x 40 firm (2770) fold down bed
177-Z	2 x 17 1/2 x 19 1/2 firm (2770) fold down bed

Foam Rubber

Here are more foam in cut sizes in the 1850 density, except a few sizes in firm density. We can order and stock your sizes to your specs.

178-A	3 x 18 x 43 1/2 (#1850) back rest
178-B	3 x 18 x 47 1/2 (#1850) back rest
178-C	1 x 16 x 24 (#1850) side panel
178-D	1 x 9 x 24 (#1850) side panel w/ arm rest
178-E	1 x 16 x 18 (#1850) side panel
178-F	1 x 9 x 18 (#1850) side panel w/ arm rest
178-G	1 x 7 x 22 reg. (#1850) seat sides
178-H	1/4" x 48 x 80 (#1835) full sheets
178-I	1/2" x 48 x 80 (#1835) full sheets
178-J	1" x 48 x 80 (#1850) full sheets
178-K	1 1/2" x 48 x 80 (#1850) full sheets
178-L	2" x 48 x 80 firm (#2770) full sheets
178-M	3" x 48 x 80 (#1850) full sheets
178-N	4" x 48 x 80 (#2770) full sheets
178-O	1 x 18 x 35 1/2 (front seat back on a fold down baby bed surrey)
178-OA	2 1/2 x 3 1/2 x 37 (front seat back on a fold down baby bed surrey)
178-OB	2 1/2 x 1 1/2 x 37 (front seat back on a fold down baby bed surrey)
178-P	1/4 " x 18 x 34 1/2 boot lid
178-Q	1/2 x 9 1/4" x 44" queen shelf
178-R	1/2 x 2 1/2 x 24 valance
	Continued on next page



Foam Rubber continued

178-S	½ x 20 x 34 upper panel
178-T	½ x 20 x 25 upper panel
178-U	½ x 18 ½ x 22 upper panel
178-V	½ x 11 x 33 ½ upper panel
178-W	½ x 11 x 20 upper panel
178-X	1" x 21 x 18 extra firm (armrest tops)
178-Y	1 x 8 ½ x 44 (2770) child's bench
178-Z	3 to 4 (wedge) x 10 ½ x 43 ½ (1850) fold down child's bench - seat back

We can ship foam rubber UPS. But because it is so bulky and makes a large package, we can drop ship from the foam company, as they can bale into smaller packages and need to be opened right away. Full sheets will vary in size, approx. 48 x 80. Price may vary depending on size.

Screws

We stock wood screws in the sizes below.

Square drive-sq Phillips-ph

Screws have to be ordered by the hundred. 5000 screws minimum if ordered in other sizes and finish.

Pan Head

179-A	⅜ x 6, sq
179-B	⅝ x 6, sq
179-C	¾ x 6, sq

Flat Head

179-D	⅝ x 4, ph
179-E	½ x 6, sq
179-F	⅝ x 6, sq
179-G	¾ x 6, sq
179-H	1 x 6, sq
179-I	¾ x 8, sq
179-I	¾ x 8, sq zinc
179-J	1 x 8, sq
179-K	1¼ x 8, sq
179-L	1½ x 8 sq
179-M	1¾ x 8, sq

Flat Head cont'd

179-N	2 x 8, sq
179-O	2½ x 8, sq
179-P	1¼ x 10, sq
179-Q	1½ x 10, sq
179-R	2 x 10, sq
179-S	2½ x 10, sq
179-T	3 x 10, sq
179-U	4 x 10, sq
179-Z	1 x 8 ph, stainless steel
180-M	1 ½ x 8 ph, stainless steel
180-N	1 x 6 ph, stainless steel
180-O	1 x 5 ph, flat black
180-P	½ x 4 ph bright brass

Washer Head

179-V	¾ x 8, sq
179-W	1 x 8, sq
179-X	1⅝ x 8, sq
179-Y	1½ x 8, sq

Washer Head

180-A	1 x 8, gloss black head, sq
180-B	1½ x 8, gloss black head, sq

Flat Head

180-D	1 x 6, gloss black head, sq dr
180-F	1 x 8, gloss black head, sq dr



Screw Bits

Type C countersink bits are for wood tools that drill, countersink and counterbore in one quick operation.

180-L	3" Square drive bit (apex)
180-M	3" Square drive bit (w/ tip)
180-N	3" Phillip drive bit (apex)
180-O	Type C-5, for #6
180-P	Type C-6, for #8
180-Q	Type C-7, for #10
180-T	Jig saw blades



Wood Whip Sockets

181-A	Wood black w/stainless bands
181-B	Wood black w/brass bands
181-C	Wood White w/stainless steel bands
181-D	Wood White w/brass bands
181-E	Natural w/stainless steel bands
181-F	Natural w/brass bands

Steel Whip Sockets

The skeleton sockets are a flush mount, while the cart socket has a mounting tab



181-G	Black skeleton
181-G	Steel skeleton (raw steel)
181-H	Brass skeleton
181-I	Stainless steel skeleton
181-J	Brass cart whip socket
181-K	Stainless steel cart whip socket

Lamp Brackets

183-E	8" Tapered stem
183-F	90° Bracket
183-G	180° Bracket



Lamp Socket



183-H	Lamp socket
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Stagecoach Latch



184-E	Brass stagecoach latch, clips on dash
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Brass Rein Holder



184-F	Brass rein holder
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Eagle Head Latch



184-G	Brass Eagle head
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Grab Handles



185-A	Black plastic handle, 9½ long, 8" center holes
185-B	Zinc handle, 5½ long, 2½ high
185-C	Chrome handle, chrome plated die cast, 6½ long, 2" high, 1½" wide
185-D	Brass handle, solid brass not polished, 8" long

Steel Grab Handles

Our steel handles are 7½ & 24½ long, or will be made to any size.

186-A	7½" steel grab handle
186-B	24½" steel grab handle

End Gate Latch

186-C	Spring latch, 10½" long
186-D	Malleable end gate hook fastener set Set includes 2 hooks & 2 eyes
186-E	Rubber End Gate Latch

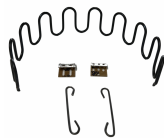


Slide Door Track

186-F	Slide door 2 tracks & 4 rollers, 48" tracks
186-G	Extra rollers
186-H	Track only 48"
186-I	Track only 96"
186-T	Track only (UHMW), 12'
186-U	Track only (UHMW), 4'
186-V	Shaped Blocks only (UHMW)
186-W	Set- 2-track & 4-blocks (UHMW)
186-X	Square blocks only (UHMW)

Springs

The springs we stock are 14 1/2" & 16" long, approx. The links are 2 1/2" long. The clips we have for either nails or staple guns. The springs, clips & links can be ordered separately, or in sets.



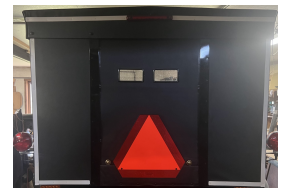
187-A	14 1/2" spring
187-B	16" spring
187-C	Clips for nails or screws
187-D	Clips for staple gun
187-E	Links
Sets	
187-F	14 1/2" spring, 2 clips & 2 links for nail or screw
187-G	16" spring, 2 clips & 2 links for staples
187-H	16" spring, 2 clips & 2 links for nails or screw

Trim-Lok

Black vinyl (pvc) outer coating. Aluminum inner clips.

187-I	Trim lock, 3/16"
187-K	Trim lock, 1/2"
187-M	Trim lock, 3/4"

Scotch Lite



The reflective tape is used on the fronts and backs of buggies to give the outline of a buggy in the dark. Will glow when lights are shined on it. We have it in white only. Sheeting comes in rolls, 12" wide. Adhesive back. We mount it on .025 aluminum sheet and cut in 7/8" wide strips, 2' & 3' long.

	White
188-A	White sheeting, 12" wide
188-B	2' Scotch lite on metal
188-C	25 pcs. per bundle
188-D	3' Scotch lite on metal
188-E	25 pcs. per bundle
	Black
188-F	Black sheeting, 12" wide
188-G	2' Scotch lite on metal
188-H	13 pcs. per bundle
188-I	3' Scotch lite on metal
188-J	13 pcs. per bundle



Reflective Tape

188-K	1" White plain per ft
188-L	1" Black plain per ft
188-M	1" White w/diamond pattern per ft
188-N	1" Silver w/squares pattern per ft
188-O	1" Silver w/diamond pattern per ft
188-P	1" White plain 150' roll
188-Q	1" Black plain 150' roll
188-R	1" White w/diamond pattern 150' roll
188-S	1" Silver w/squares pattern 150' roll
188-T	1" Silver w/diamond pattern 160' roll
188-U	1" Red w/diamond pattern per ft



Paint

This is the paint inventory we try to keep in stock.

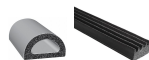
189-A	U-Tech 280 Black, polyurethane	gal
189-B	U-Tech 280 Activator	gal
189-C	U-Tech 280 Activator	qt.
189-D	U-Tech 2K100 Primer	gal
189-E	U-Tech 2K100 Activator	qt.
189-F	U-Tech E350 Epoxy Primer	gal
189-G	U-Tech E350 Epoxy Activator	gal
189-H	U-Tech E359 Epoxy Flow additive	gal
189-J	Laquer thinner	qt.
189-K	Laquer thinner	gal
189-L	Paint, Lancaster, Black, Urethane	gal
189-M	Paint, Lancaster, Activator	qt
189-N	Paint, Lancaster, Activator	gal
189-P	Paint thinner, Xylene	gal
189-Q	Paint thinner, Xylene	qt
189-T	Grease and wax remover - cleaner	gal
189-U	Black non-hardening paint (Corotech)	gal
189-V	Black non-harden. paint (Super Spec)	qt
190-A	White paint coverall	

Master Paint Stripers

Single kit or 6 different wheels Including: 1/32 to 1/4

190-B	Master striper kit, single or double lines
190-BA	Master striper kit, single line

Weather Strip



190-E	5/32" x 3/8", 50 ft roll
190-F	5/32" x 3/8", per ft.
190-G	Hollow D, 3/8", per ft.
190-H	Ribbed, 3/8", per ft.

Caution Sign



191-A	Caution sign, black on yellow, plastic, 18 x 18
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Whoa Sign



191-B	Whoa sign, red on white, plastic, 18 x18
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Hobby Sign



191-C	Hobby sign, black on white, plastic
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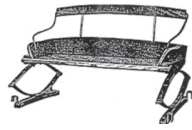


Windshield Wipers

191-D	Windshield wiper, hand operated.
191-E	Wiper blades
191-F	Knob
191-G	Set screw for knob
191-H	Wiper arm
191-I	Blade adapter
191-J	3/8" Hollow headed rod w/2 nuts
191-K	1/4" Single end threaded rod

New Style Windshield Wipers

191-N	Complete windshield wiper, stainless
191-O	Wiper Blade 13"
191-P	Wiper Blade 11"
191-R	Wiper Knob



Wagon Seats

State length when ordering.

192-A	Wagon w/ 2- seat springs - unfinished
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Seat Hangers

192-B	Steel seat hanger
192-C	Zinc seat hanger

Buggy & Carriages

We custom build any style buggies & carriages.

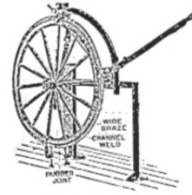
Listed below are prices on some of the buggies, although there are various options that can be added, which will make a difference on the prices.

Some of the options are fenders on the surries, cut-unders, brass dash rails, brakes, poles, lights and various other options which are too numerous to mention.

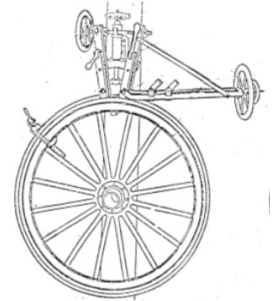
We will be glad to quote prices on any buggies you might be interested in. Please send details.

193-A	Single seat runabout
193-B	Single seat w/auto top
193-C	Surrey less top
193-D	Surrey w/fringe top
193-E	Surrey w/extension top
193-F	Spring wagon w/one seat
193-G	Spring wagon w/second seat
193-J	Road cart
193-K	Meadowbrook cart
193-L	Draft horse Meadowbrook

Rubber Tire Machine



Tire Closer



Rubber Tire Machine

194-A	Rubber tire machine w/side arm (like picture)
194-B	Tire closer
194-C	Rubber tire machine w/side arm crank system

These machines can be shipped UPS in several packages. Add extra for shipping UPS....\$20.00 per machine.

Bradley Shaft Coupling

195-A	3/4" Socket
195-B	3/4" Ball
195-C	7/8" Socket
195-D	7/8" Ball
195-E	Leather packing

Wagon Bow Clips

195-F	2" bow clips
195-G	2 1/2" bow clips
195-H	3" bow clips



Wagon Bows

195-I	2" Wagon bows 1/2 x 2 x 46 x 72 Comes in bundle of 5
195-J	2 1/2" Wagon bows 1/2 x 2 1/2 x 46 x 72 Comes in bundle of 5



Covered Wagon Canvas



195-K	11½' x 12' w/open end drawstrings
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Cooling Fans



196-A	80mm Cooling Fan
196-B	Fan Guard for 80mm fan

Gas Props



196-E	Prop Bracket only side mount, (boot lid)
196-F	Prop Bracket only 90
196-G	6" x 10 lb w/ 2 brackets, (boot lid)
196-H	Prop only, 6", 10 lb., (boot lid)
196-I	Prop only, 6", 20 lb., (boot lid)
196-J	26" x 55 lb (hatchback)
196-K	15" x 20 lb (feed box)
196-L	12" x 20 lb (feed box)

Shaft Struts (Heavy Gas Props)

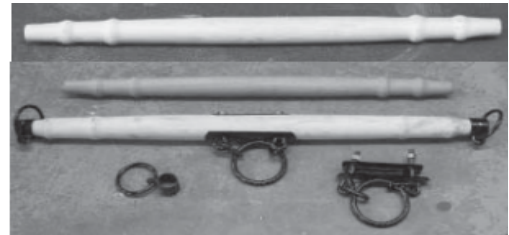
196-N	28" complete set w/ brackets, 150 lb.
196-O	28" complete set w/ brackets, 200 lb.
196-P	28" strut only, 150 lb., (ea.)
196-Q	28" strut only, 200 lb., (ea.)
196-R	Ball studs only, (ea.)
196-S	Safety clip only, (ea.)
196-T	4 pc set steel brackets, black

Harness Hook



197-A	Harness hook - 10" black
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Heavy Draft Neck Yokes



State length when ordering

201-A	Neck yoke blank only
201-B	Neck yoke blank only (lightweight) can be used with 88 E leather center
201-C	Neck yoke with eyebolt center & end rings
201-D	Neck yoke with 4" center ring & end rings
201-E	Neck yoke with 3" center ring & end ring
201-F	Neck yoke with leather center and end rings
201-G	NY end Ferrule & ring
201-H	Neck yoke center irons (swivel eye bolt set)
201-I	Neck yoke center irons (4" ring set)
201-J	Neck yoke center irons (3" ring set)
201-K	Neck yoke mini size 28" w/center and end rings
201-L	Neck yoke mini size 26" w/center and end rings

Lead Singletrees and Evener sets



202-A	26" Unicorn Singletree, (for one up)
202-B	26" x 36" Lead Singletrees and Evener set, (for two up)
202-C	30" Draft Unicorn Singletree, (for one up)
202-D	30" x 42" Draft Lead Singletrees and Evener set, (for two up)



Wagon Singletrees & Eveners



Singletrees	
203-A	22"
203-B	24"
203-C	26"
203-D	28"
203-E	30"
203-F	32"
203-G	34"
203-H	36"
Wagon Eveners	
203-I	32 x 22 pony
203-J	34 x 24 pony
203-K	36 x 26
203-L	38 x 26
203-M	40 x 28
203-N	42 x 30
203-O	44 x 32
203-P	46 x 32 or 34
203-Q	48 x 34
Evener Only	
203-R	32"
203-S	34"
203-T	36"
203-U	38"
203-V	40"
203-W	42"
203-X	44"
203-Y	48"
203-Z	50"

Evener & Neck Yoke Hardware



204-A	2 x 3 clevis
204-B	2 x 4 clevis
204-C	2 x 5 clevis
204-D	Singletree center
204-E	Singletree hook
204-F	Stay chain clevis
204-G	Eye bolt set
204-H	Jockey yoke center w/snap
204-I	Tongue end for 3" ring
204-J	Tongue end for 4" ring
204-K	Tongue end hook
204-L	Tongue end for chain

Steel Rings

205-A	3/8 x 2 1/2 steel ring
205-B	3/8 x 3 steel ring
205-C	7/16 x 3 steel ring
205-D	1/2 x 4 steel ring



Shaft Shackle & Clevis

205-E	Shaft Shackle, to use on hitch wagon fifth wheel
205-F	2" spring clevis
205-G	2 1/2" spring clevis



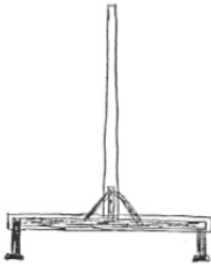
Axles for Archbald Hub

208-H	2" axle only
208-I	2" axle & bearing
208-J	2" axle stubs & bearings
208	369A, Inside bearing
208	LM29749, Outside bearing
208-K	2" grease seal
208-L	2¼" axles & bearings
208-M	2½" axles & bearings

Wagon Tongues

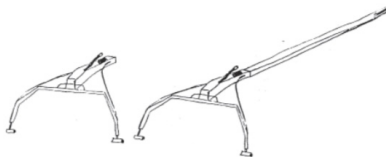
209-C	Ash wagon tongue, 3½ x 4½ x 12
209-D	Sanded

Pole for Anderson Fifth Wheel



This is the 91-E stiff pole w/steel plates on bottom. This pole can not be shipped assembled by UPS.

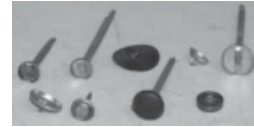
210-D	Steel on bottom only
210-E	Complete pole assembled



Steel Bow for Pole

This pole is made with steel tubing in the back. There is a 91-E pole that is inserted to make a complete pole. The assembled pole cannot be shipped UPS.

211-A	Steel bow only
211-B	Complete pole w/steel bow



Buttons

	#22 Buttons
215-A	2" prong button
215-B	2½" prong button
215-C	3" prong button
215-D	Prong button spring
215-E	Wire eye button
	#30 Buttons
215-F	Wire eye button
215-G	Button mold
215-H	2½" prong button
215-I	#22 button covered with your material
215-J	#30 button covered with your material
215-K	#22 button mold

Rubber Matting

Comes in 50' rolls (add the letter R behind the part # when buying by the roll)

216-A	Rubber matting, per ft. - 26 1/8"
216-B	Rubber matting, per ft. - 36"
216-C	Rubber matting, per ft. - 48"
216-D	Rubber matting, per ft. - 30"
216-E	Rubber matting, per ft. - 26 5/8"



Heaters



217-A	Blue Flame LP buggy heater
217-B	6' hose w/ regulator
217-C	8' hose w/ regulator
217-D	6' hose only
217-E	Regulator only
217-F	Thermo coupler
217-G	5 lbs. LP tank, empty
217-H	5 lbs. LP tank, filled
217-I	Complete set, w/empty tank, hose, heater, etc.
217-K	Complete set, w/full tank, hose, heater, etc.
217-O	Heater, Brick w/needle valve
217-P	Magma Heater (uses diesel, kerosine, or mineral spirits fuel)
217-S	Tank Box Plastic, rounded front
217-T	Tank Box Plastic, square

Switches and Switch Panels

These are large high quality waterproof marine switches that should not have to be replaced.



218-A	Large switch lighted (on-off)
218-B	Large switch lighted (on-off-on)
218-C	Large 7-hole w /lighted switches
218-D	Large 5-hole w /lighted switches
218-E	Large 2-hole w /lighted switches
218-G	6-Hole w/ mini red rocker
218-H	6-Hole w/ mini green rocker

Switches

218-I	Switch mini lighted, Green (on-off)
218-J	Switch mini lighted, LED (on-off)
218-K	Switch mini lighted, Red (on-off)
218-L	Switch mini momentary, Black
218-N	Switch rocker (on-off)
218-O	Switch rocker (on-off-on)
218-P	Switch rocker momentary
218-R	Switch rocker 1-hole panel
218-S	Switch rocker 2-hole panel
218-T	Switch rocker 3-hole panel



Toggle Switches

219-A	Switch toggle
219-B	Switch toggle, 2-way
219-C	Switch toggle, 3-way
219-D	Switch turn, 3-way w/ beeper
219-E	Switch toggle D.P.D.T.
219-F	Switch turn signal, Large
219-G	Switch turn signal, small
219-H	Switch Horn Button
219-I	Switch Dimmer



Other Switches

219-J	Switch Door Jam
219-K	Switch Key
219-N	Switch Toggle Long Handle w/ screws
219-O	Switch Toggle Long Handle w/ spades
219-P	Switches Push-Pull
219-Q	Switches Push-Pull, long stem



Speedometers



220-A	Cat Eye speedometer
220-B	Black Steel Rod Dash Mounting Bracket
220-C	Black Steel Sensor Bracket only
220-D	Cat Eye Bike Spoke Magnet
220-E	Cat Eye Sensor Only
220-G	Tripstar Speedometer, GPS wireless
220-I	Trooper, Speedometer, voltmeter, clock, & thermometer) (drum brake kit)
220-J	Trooper, Speedometer, voltmeter, clock, & thermometer) (disc brake kit)
220-K	Speedometer Trooper mounting bracket only

Clocks



221-A	Round Atomic, 3 1/2" round, 3 1/8" mounting diameter
221-B	Clock Mount (for 221-A) black wood screw on block with 3 1/8" hole
221-C	Clock battery AAA
221-E	Digital clock w/battery gauge
221-G	Clock battery size N
221-F	Clock round, 2 3/8" gold

Cup Holders



221-H	Black cup holder, fold down
221-I	Black poly vinyl
221-J	Black recessed
221-K	Swivel Cup holder

Flashers

222-A	Flasher LED 2-wire
222-B	Flasher LED 2-wire, reversible
222-C	Flasher LED #5000 Heavy Duty
222-E	3- prong, 550
222-F	2-prong, 552
222-G	Flasher Socket w/ bracket

Diodes

222-I	Block, double 3 amp w/ wire leads
222-J	1 amp
222-K	1 amp w/ wire leads
222-L	3 amp
222-M	3 amp w/ wire leads
222-O	Beeper

Horn

222-Q	Horn Loud
222-R	Horn marine



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