

The HELLE Carriage



Equipment may vary
from what is pictured.

PARTS MANUAL

HELLE Sawmill Equipment

Mfg. by Sawmill Hydraulics, Inc.

1-800-245-2448

www.4HELLE.com

THANK YOUR FOR PURCHASING A HELLE CARRIAGE!

Enclosed in this manual you will find many of the parts available for your carriage. Not all parts are listed in this manual. If you don't see your part or a similar part, PLEASE call the factory. We have many parts that are not listed here. We will gladly work with you to find the part you need. Most of the parts on your HELLE carriage are stocked by Sawmill Hydraulics, and we can them have in your hands the next day.

If you purchased our heavy duty model, part numbers in this book can still be used as a reference. Just make sure that you indicate that your model is a heavy duty when ordering parts.

COMMONLY ASKED QUESTIONS:

How often should I grease everything?

This should be done daily except bearings which should be done monthly.

What should the pressure on the carriage be?

The gauge should read around 1,000 PSI. Anything Higher then 1200 and you'll void the warranty and cause premature failure of parts and inaccurate sets.

What kind of oil should I use?

Check with your local route person for a good grade of hydraulic oil.

How often should I change the filters.

We recommend you change the filters every 3 months.

How tight should I keep the chains on the headblock?

You should keep the chains tight, about the tightness of a banjo string. Note: you can over tighten them, this will cause the chains to break. If they are too loose the setworks will be inaccurate.

Can you come out into my place to do repairs?

Yes, we are here to serve you. Call us today at 1-800-245-2448

Who do I call if I have problems?

You can call us directly at 1-800-245-2448, even if you purchased your HELLE equipment through someone else.

Open the lid of the control box, before you call. There are indicator lights and little relays that go “click” that tell us a lot. Look for anything odd or out of place. We once had a customer call with problems, only to find out that when he opened the lid of his box that someone had removed a part. He replaced it and things worked just fine.

Please feel free to call us at 1-800-245-2448, But before you call the factory:

Good communication is the key to successful telephone troubleshooting. In different regions of the country, different terms are often employed for the same item. We offer the following list to guide you thru the troubleshooting procedure:

Set: Pushing the button that moves the knees automatically for a selected thickness.

Recede: To back the knees up.

Jog: To move the knees forward at full speed.

Slow Jog: To move the knees forward at a reduced rate of speed.

Valve: The device on the carriage that has the hoses going to it and is connected to the electrical system located on the back of your carriage.

Relays:

On the cam limit system these are a glass tube that plugs into a socket in the control box.

On the computer systems this is a little black square with a red light on it in the control box.

Cylinder: Most people know what this is but we have had customers use such terms as “ram”, “jack” or “rod”.

Taper: Moves the Dogs in & out.

Finally we offer these points based upon past experience:

Let us talk to the operator or maintenance man. Though we enjoy talking to our customers effective troubleshooting is best achieved if we talk with the person running the machinery when it quits or the maintenance person. This will simplify troubleshooting and shorten down time.

Cellular or cordless phones can be a wonderful tool. We have solved problems in the past by listening to what is happening. Not to mention it eliminates "I'll run over and check and call you back".

Tell us everything.

We drove 300 miles once and could feel the heat from the tank when we got 10 feet away. "Didn't I tell you it was getting hot?" When on the phone we are depending on you to be our eyes. If you see something wrong or odd, please tell us.

Tell us that you changed a valve. We have had multiple cases of dual problems. The first one was simple, the second one was masked by installing a defective part. This is a real troubleshooting nightmare.

If at all possible when replacing parts, please use new parts that you are sure are in good working order. Many times a customer has told us that they replaced a valve with a new valve. Only to find out that someone else had used it on another machine and not told anyone, or that it was a rebuilt valve bought at an auction.

We have had cases of driving all day only to find that someone had screwed a pressure control all the way one direction or wired a switch backwards. "Nobody here touched that." (Employees don't want the boss to get down on them.) We need to know everything.

And last but not least:

Don't accept substandard performance. If the machinery has something that doesn't work, we encourage you to call it to our attention, don't just live with it. Often times the cure is very simple. We had a case where a customer wasn't tapering his logs because someone had installed the wrong kind of toggle switch. His sawyer just accepted that because "it had been like that since I started here."

Your HELLE equipment is capable of providing years of service cutting accurate lumber. Communication is the key to keeping it that way. Thank you for taking the time to read this and for purchasing HELLE equipment.

**WHERE TO ADJUST
THE KNEE**

KNEE

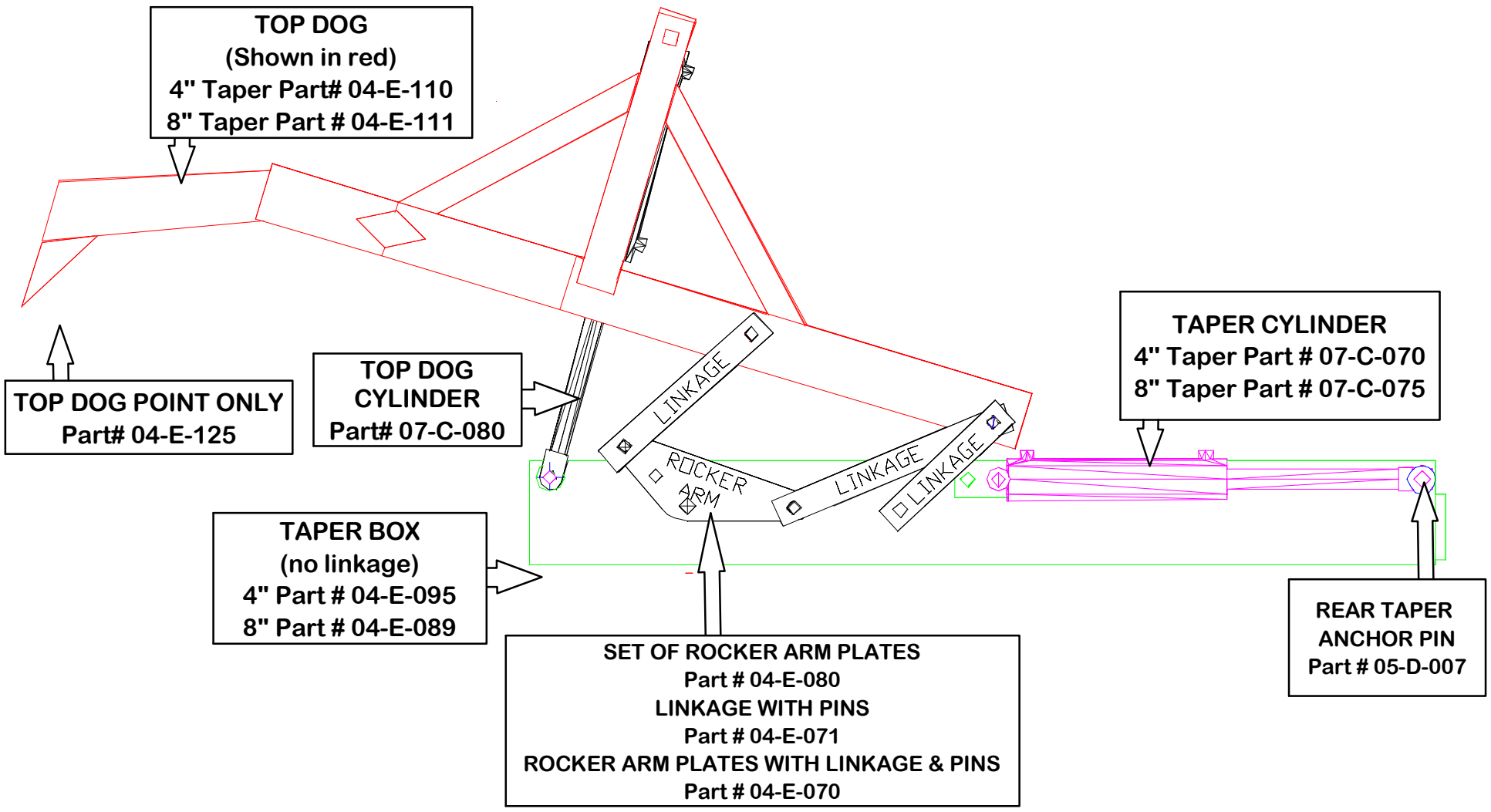
HEADBLOCK

**DO NOT TURN
THIS BOLT**

**TO MOVE TURN
THESE "JAM" NUTS.**

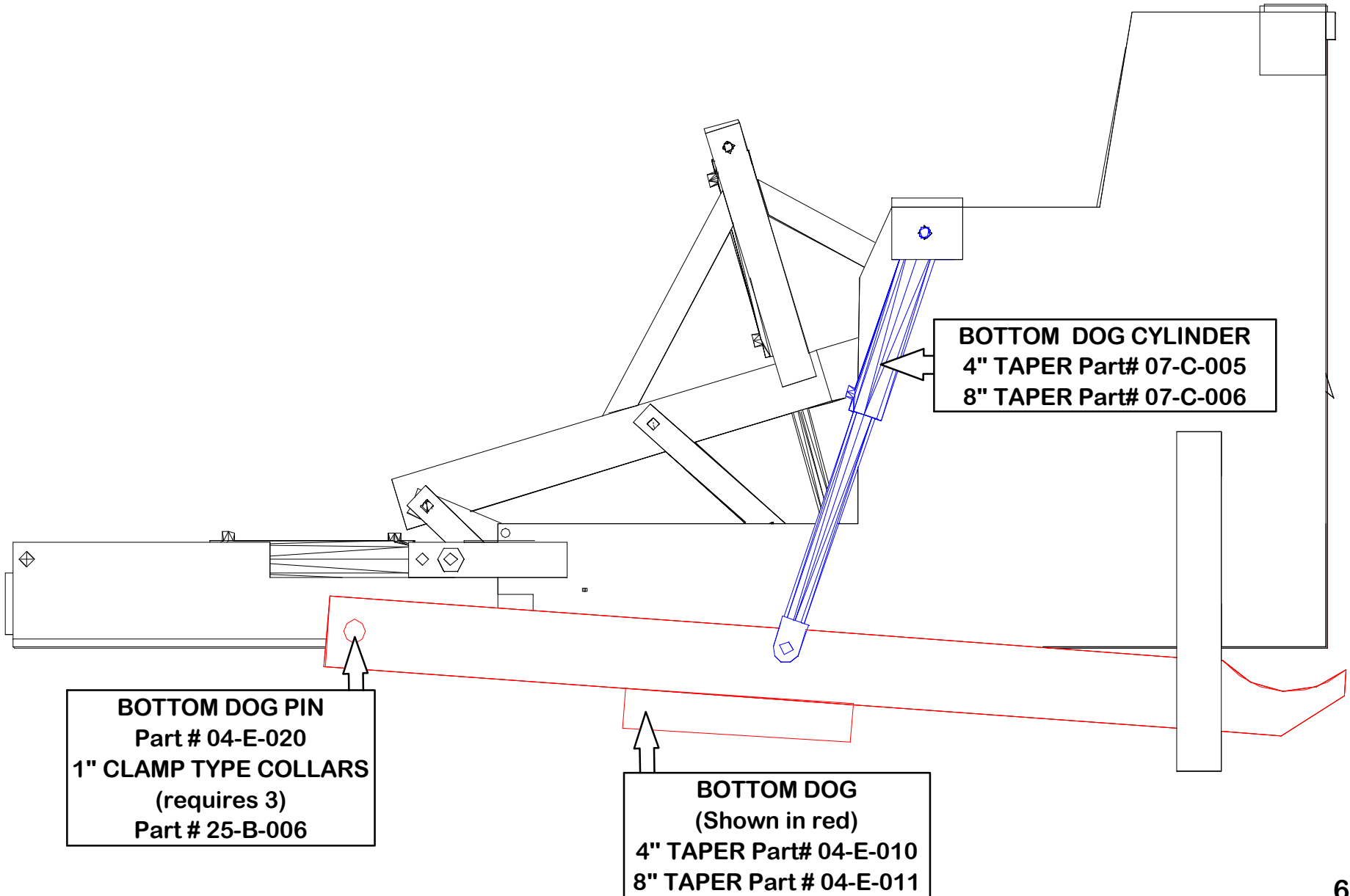
CARRIAGE PARTS

TOP DOG AND TAPER PARTS

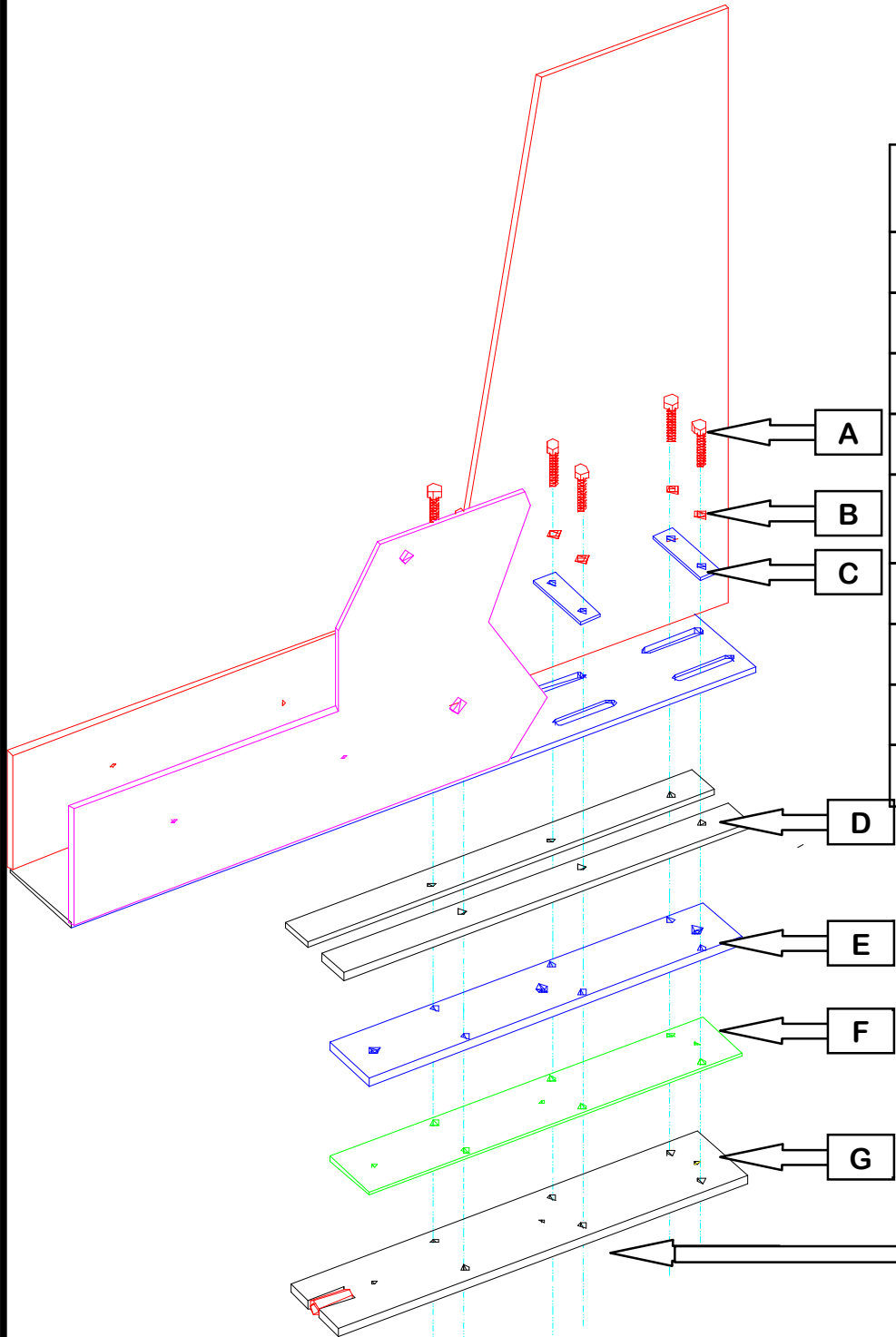


CARRIAGE PARTS

Bottom Dog



CARRIAGE PARTS MAIN SLIDE



	DESCRIPTION	24" MAIN SLIDE PART #	36" MAIN SLIDE PART #	NOTES
A	BOLT	NB-A-080	NB-A-080	EACH KNEE REQUIRES 6
B	FLAT WASHER	NB-C-017	NB-C-017	EACH KNEE REQUIRES 6
B	LOCK WASHER	NB-C-035	NB-C-035	EACH KNEE REQUIRES 6
C	STEEL PLATE	04-E-059	04-E-059	EACH KNEE REQUIRES 3
D	RYERTEX WEARPLATES	04-J-155	04-J-160	MUST BE ORDERED IN PAIRS
E	MAIN SLIDE TOP	32-A-146	SEE NOTE	FOR 36" CALL 1-800-245-2448
F	MAIN SLIDE RYERTEX	04-J-175	04-J-177	
G	MAIN SLIDE BOTTOM	04-J-012	SEE NOTE	FOR 36" CALL 1-800-245-2448
H	COMPLETE MAIN SLIDE ASSEMBLY	04-J-015	04-J-020	INCLUDES PARTS E, F, & G

CHAIN BRACKET BLOCK

Welded to the bottom side of part G.
The chain connects to this piece

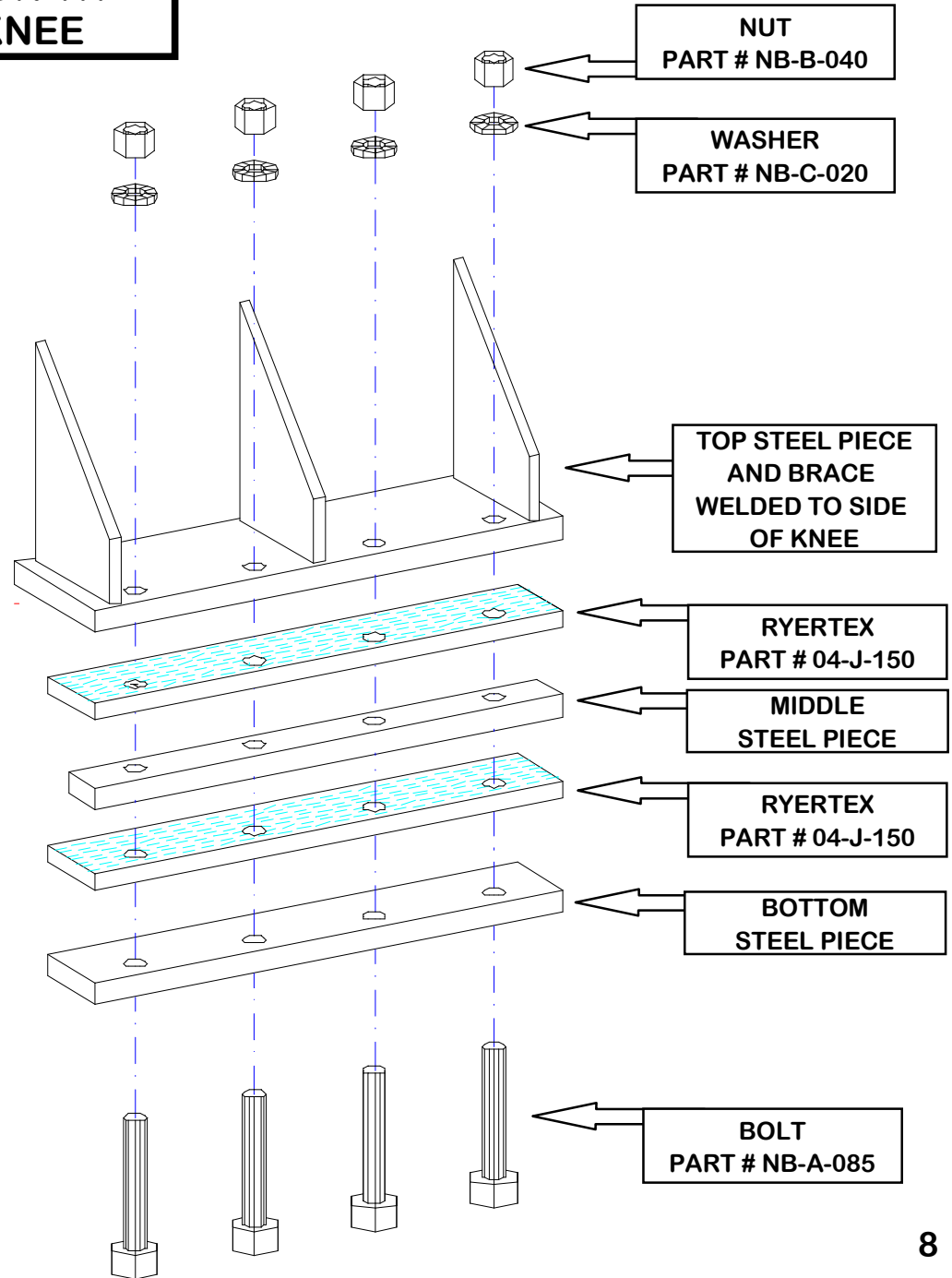
STYLE	PART #
SINGLE 80 CHAIN	05-A-021
DOUBLE 80 CHAIN	05-A-100
TRIPLE 80 CHAIN	05-A-110

NOTE:
This part is included with part G & H.

CARRIAGE PARTS WRAP AROUND ON THE SIDE OF THE KNEE



**COMPLETE WRAP AROUND
PART # 04-J-165
(INCLUDES ALL OF THE PARTS
SHOWN ON THIS PAGE.)**



CARRIAGE PARTS HEADBLOCK WEARPLATES PARTS

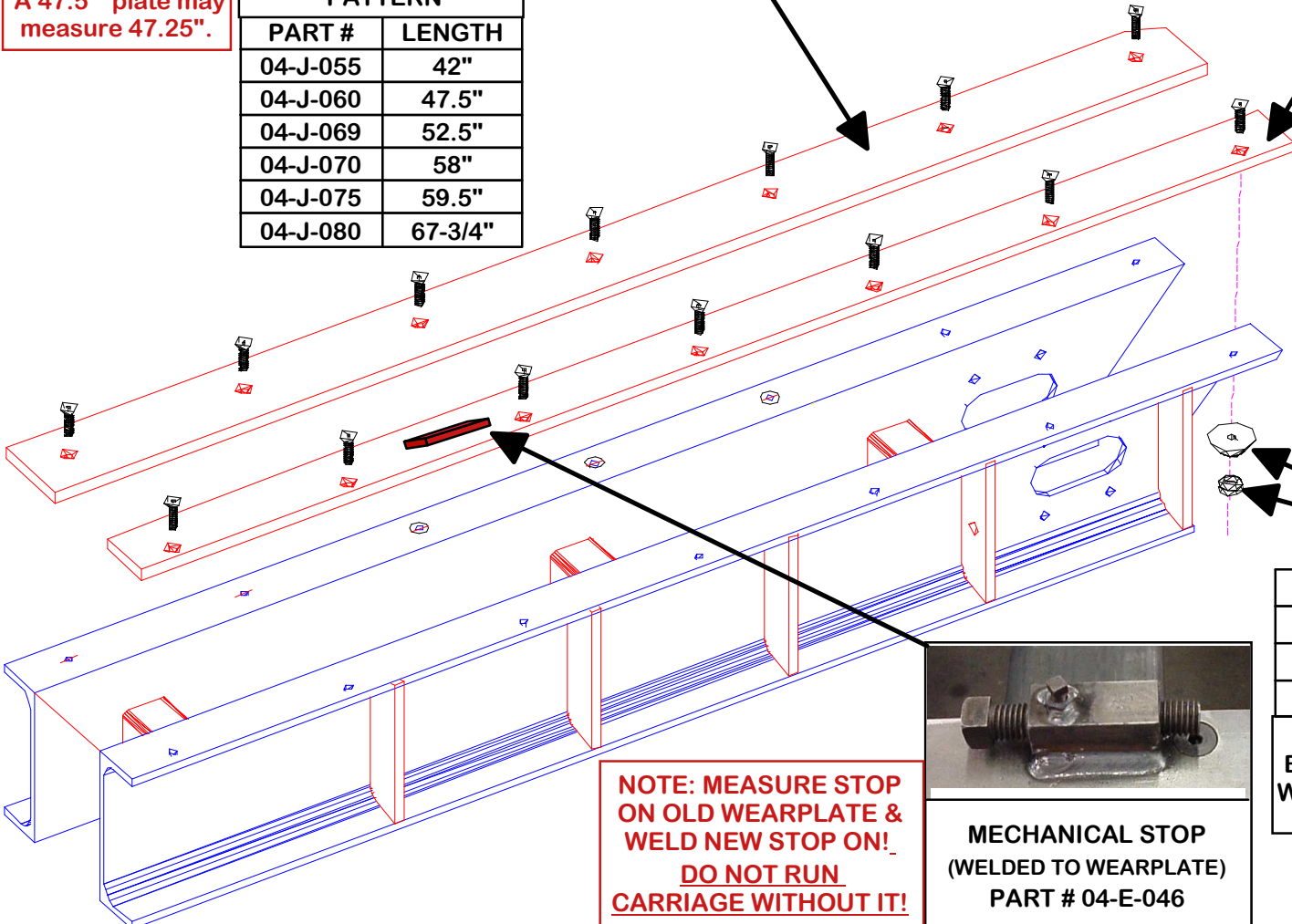
NOTE: YOUR WEARPLATE MAY NOT MEASURE EXACTLY THE SAME AS THE MEASUREMENTS SHOWN DUE TO WEAR ON THE FRONT OF THE PLATE.

**For example:
A 47.5" plate may measure 47.25".**

3-1/2" STEEL WEARPLATE	
SINGLE BOLT PATTERN	
PART #	LENGTH
04-J-120	42"
04-J-125	47.5"
04-J-130	52.5"
04-J-135	58"
04-J-140	59.5"
04-J-145	67-3/4"
DOUBLE BOLT PATTERN	
PART #	LENGTH
04-J-055	42"
04-J-060	47.5"
04-J-069	52.5"
04-J-070	58"
04-J-075	59.5"
04-J-080	67-3/4"

**NOTE: When ordering please indicate which headblock you're ordering for. (example: 1st, 2nd, 3rd, etc.)
If your wearplate length is not shown call the factory at 1-800-245-2448**

2-1/2" STEEL WEARPLATE	
SINGLE BOLT PATTERN	
PART #	LENGTH
04-J-090	42"
04-J-095	47.5"
04-J-100	52.5"
04-J-105	58"
04-J-110	59.5"
04-J-115	67-3/4"
04-J-094	66"
DOUBLE BOLT PATTERN	
PART #	LENGTH
04-J-025	42"
04-J-030	47.5"
04-J-035	52.5"
04-J-040	58"
04-J-045	59.5"
04-J-050	67-3/4"



**NOTE: MEASURE STOP ON OLD WEARPLATE & WELD NEW STOP ON!
DO NOT RUN CARRIAGE WITHOUT IT!**

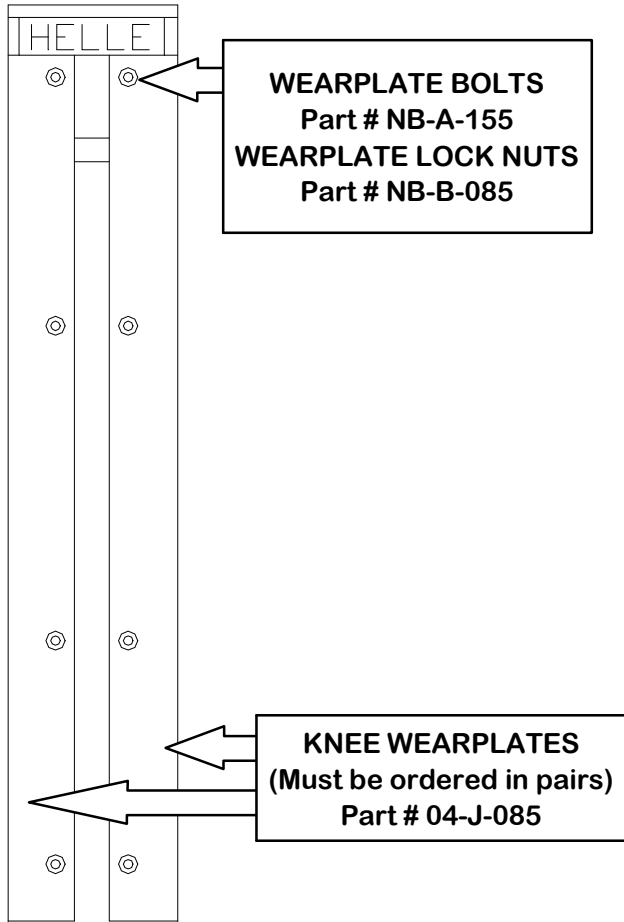


**MECHANICAL STOP
(WELDED TO WEARPLATE)
PART # 04-E-046**

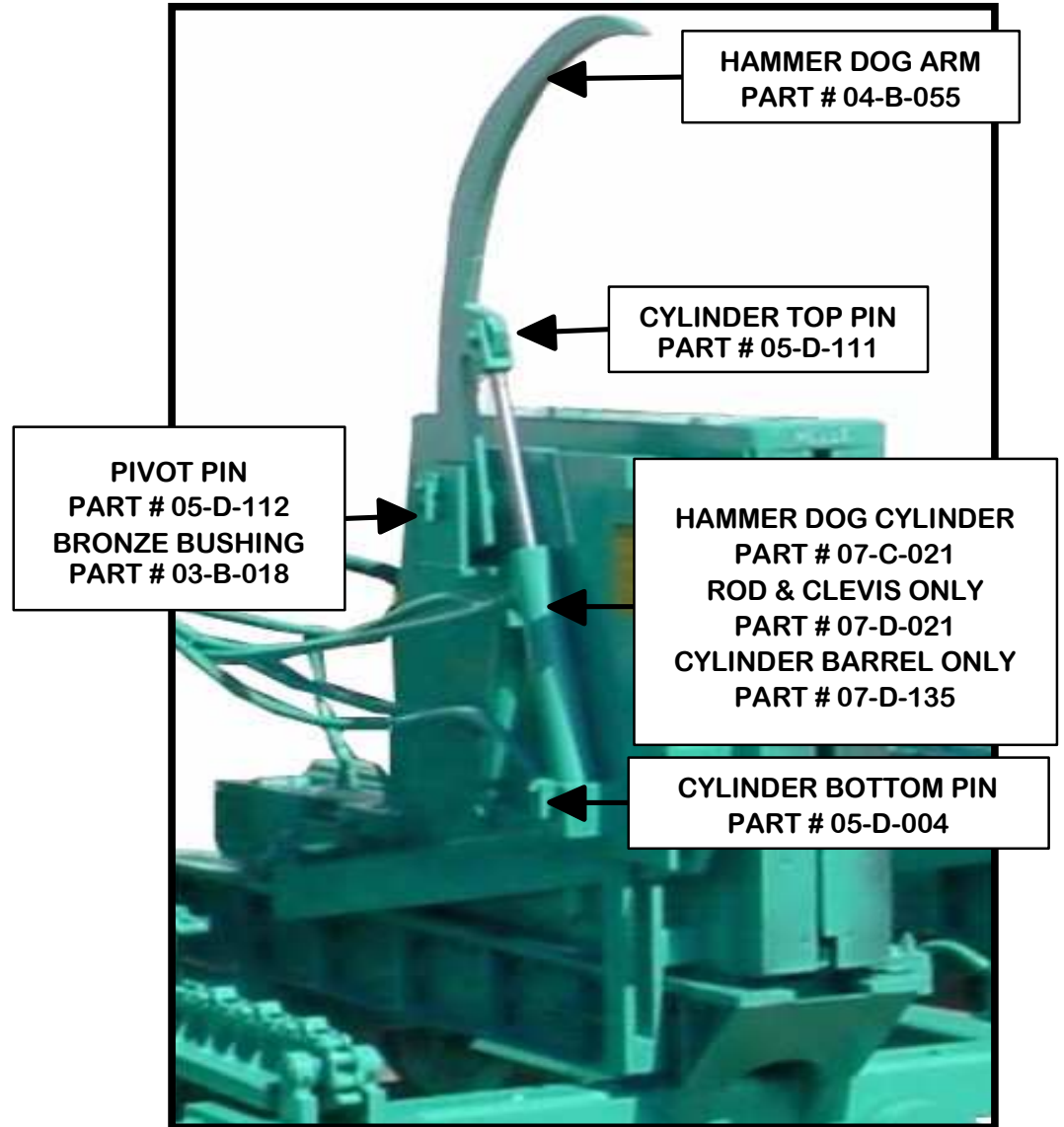
DESCRIPTION	PART #
WEARPLATE BOLTS	NB-A-155
WEARPLATE LOCKNUTS	NB-B-085
HILLSIDE WASHERS	04-J-087

NOTE: NUMBER OF BOLTS NEEDED VARIES BY LENGTH OF WEARPLATES, CONSULT THE FACTORY

CARRIAGE PARTS KNEE WEARPLATES



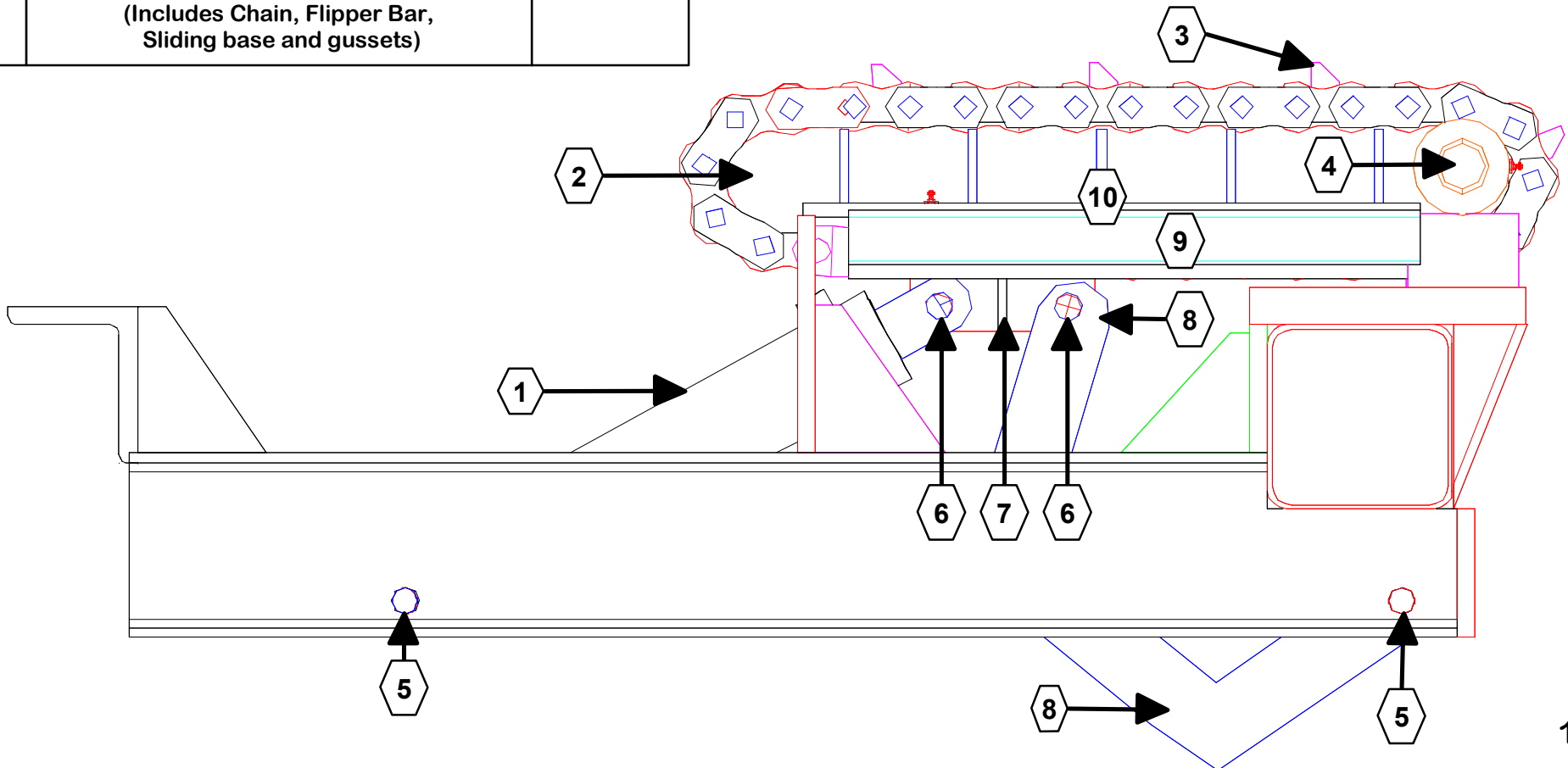
CARRIAGE PARTS HAMMER DOG PART # 04-B-050



CARRIAGE PARTS FLIPPER PARTS

#	DESCRIPTION	PART #
1	2" X 10" FLIPPER CYLINDER	07-C-015
1	2" X 12" FLIPPER CYLINDER	07-C-020
2	FLIPPER BAR ONLY	04-C-015
3	FLIPPER TOOTH	04-C-050
3	CONNECTING LINK	05-B-045
3	COMPLETE #120 FLIPPER CHAIN	04-C-010
4	PIVOT SHAFT	04-C-055
4	BRASS BUSHING (requires 2)	01-D-216
5	PIN .75" x 4.5"	04-C-040
6	PIN .75" x 2.5"	04-C-035
7	INSIDE SLIDER BAR	04-C-025
8	OLD STYLE STRAIGHT LINKAGE *	04-C-030
8	NEW STYLE WRAP AROUND LINKAGE*	04-C-030N
9	SLIDING BASE	04-C-045
10	COMPLETE ASSEMBLED FLIPPER HEAD (Includes Chain, Flipper Bar, Sliding base and gussets)	04-C-020

* If your carriage has the smooth wheel on the outside of the frame and a hex axle then your flipper has the new style-wrap around linkage. If your carriage has the smooth wheel on the inside of the frame and a round axle then your flipper has the old style straight linkage.



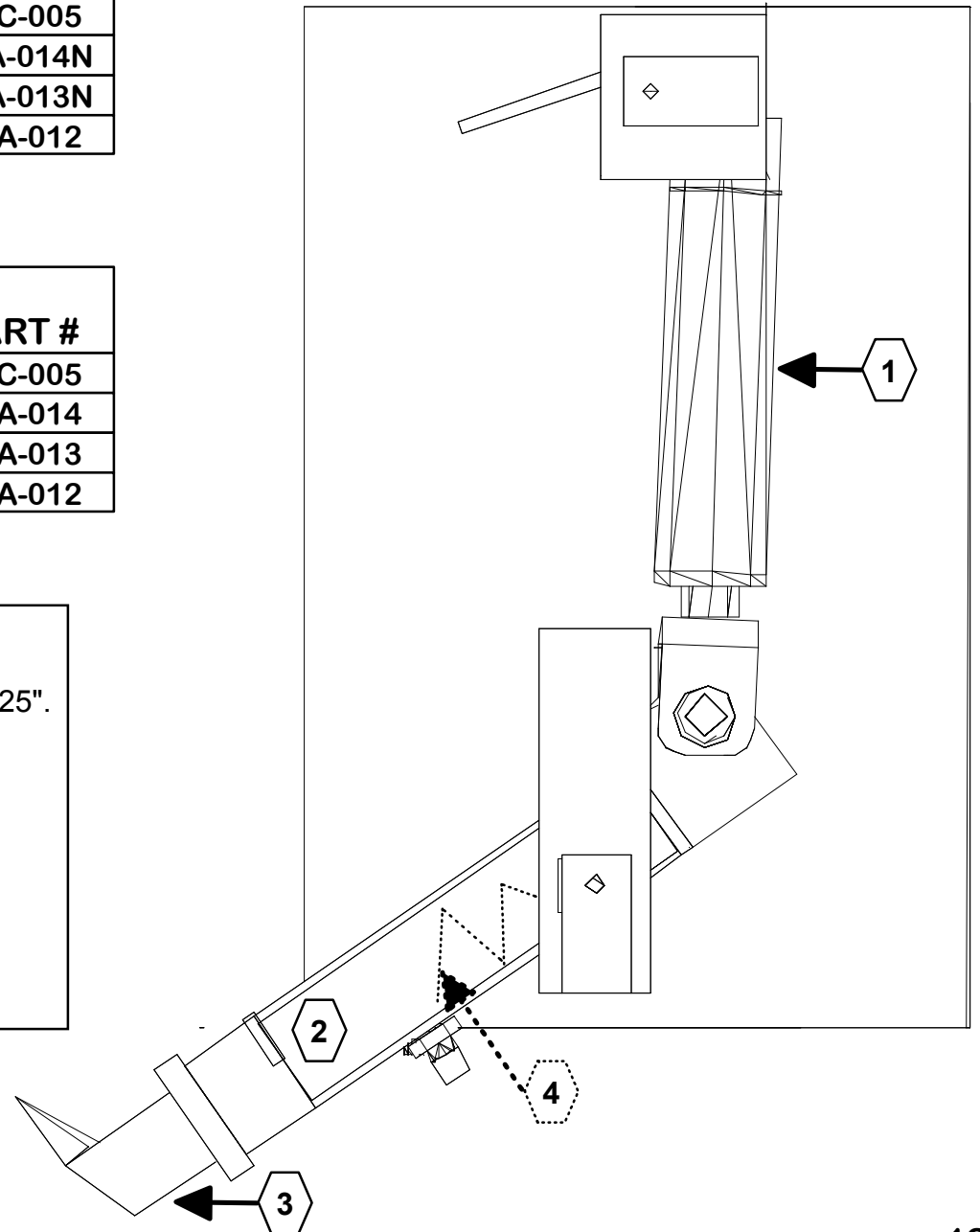
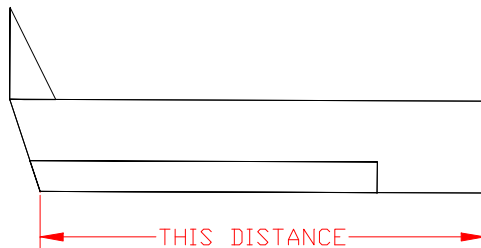
CARRIAGE PARTS KICKER

#	NEW STYLE DESCRIPTION	PART #
1	KICKER CYLINDER	07-C-005
2	NEW STYLE KICKER TUBE	27-A-014N
3	NEW STYLE ARM W/ SPRING	27-A-013N
4	SPRING (inside tube)	27-A-012

#	OLD STYLE DESCRIPTION	PART #
1	KICKER CYLINDER	07-C-005
2	OLD STYLE KICKER TUBE	27-A-014
3	OLD STYLE ARM W/ SPRING	27-A-013
4	SPRING (inside tube)	27-A-012

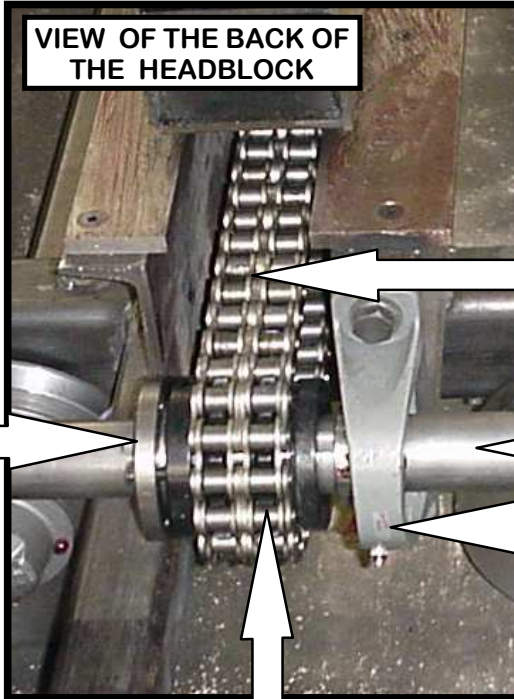
WHAT IS THE DIFFERENCE?

The old style kicker length on the backside is about 7.25".
The new style is about 9.25" in length.



CARRIAGE PARTS DRIVE SPROCKET PARTS

VIEW OF THE BACK OF THE HEADBLOCK



	DOUBLE #80 CHAIN	TRIPLE #80 CHAIN
CHAIN	05-A-075	05-A-085
CONNECTING LINK	05-B-065	05-B-085
HALF LINK/ OFF SET LINK	05-C-055	05-C-070

SET SHAFTS ARE AVAILABLE
CALL THE FACTORY TO ORDER
YOURS AT 1-800-245-2448



BUSHING
PART # 03-A-065C



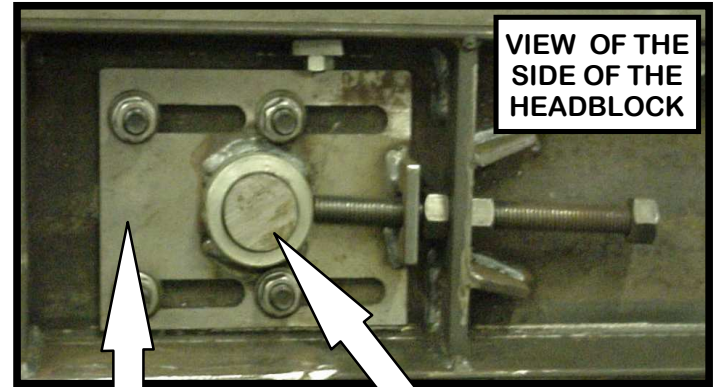
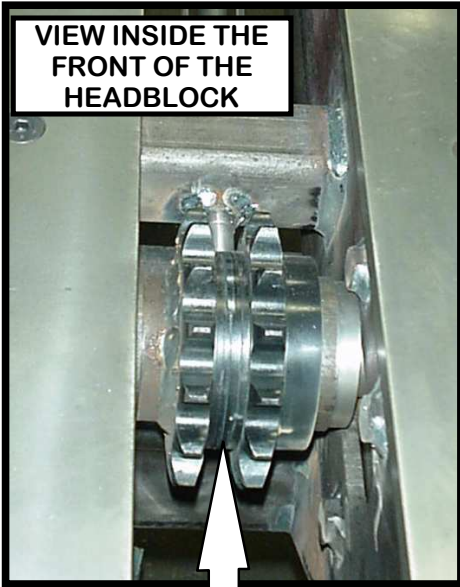
SET SHAFT BEARING
PART # 01-D-095



DOUBLE SPROCKET
PART # 28-A-065
TRIPLE SPROCKET
PART # 28-A-097

CARRIAGE PARTS

IDLER SPROCKET PARTS



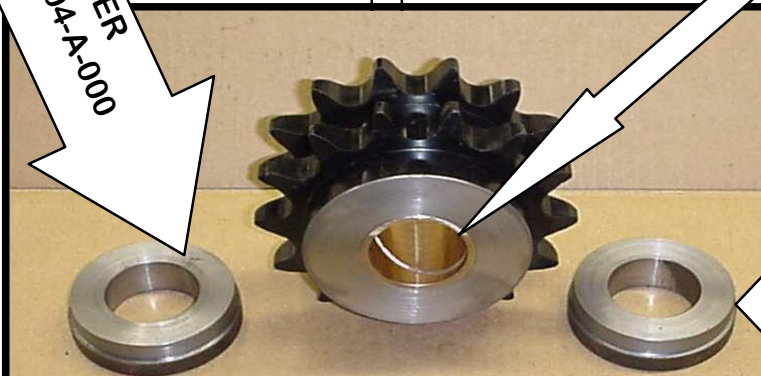
BRASS BUSHING
 DOUBLE 80
 PART # 03-B-018
 TRIPLE 80
 PART # 03-B-019

IDLER FLANGE
 PART #
 15-C-025A



IDLER SHAFT
 DOUBLE SPROCKET PART # 26-C-015
 TRIPLE SPROCKET PART # 26-C-016

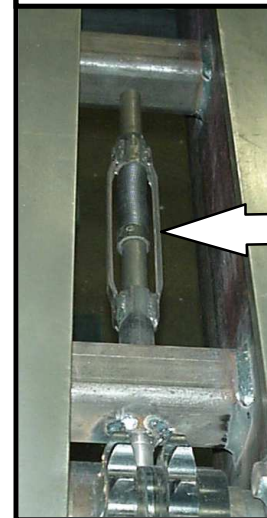
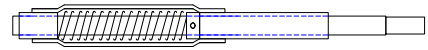
SPACER
 PART # 04-A-000



DOUBLE SPROCKET PART # 28-A-065
DOUBLE SPROCKET W/BUSHING PART #28-A-065
TRIPLE SPROCKET PART # 28-A-096

SPACER
 PART # 04-A-000

VIEW INSIDE THE FRONT OF THE HEADBLOCK

SPROCKET CLEANER
 PART # 28-B-005
 NOTE: If your carriage has triple chain in the headblocks there are two sprocket cleaners in the headblocks

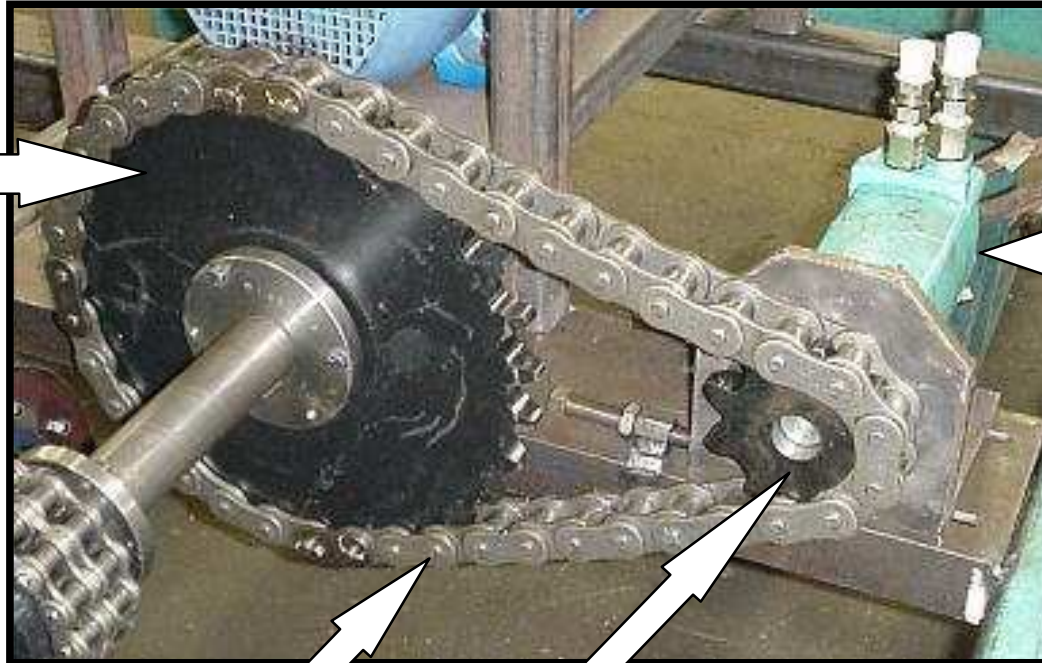
CARRIAGE PARTS HIGH SPEED DRIVE PARTS



**SET SHAFT SPROCKET
PART # 28-A-075**



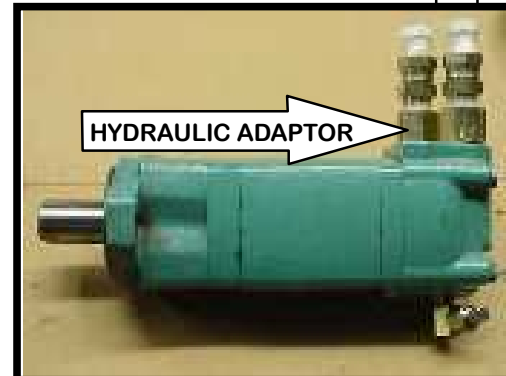
**SPROCKET BUSHING
PART # 03-A-070C**



**CHAIN
PART # 05-A-055
(NEED LENGTH)
CONNECTING LINK
PART # 05-B-045
OFFSET/HALF LINK
PART #05-C-035**



**MOTOR SPROCKET
PART # 28-A-239**



HYDRAULIC ADAPTOR

**HYDRAULIC MOTOR
PART # 20-B-132
CASE DRAIN FITTING
PART # 13-E-007
HYDRAULIC ADAPTOR
PART # 21-L-050**



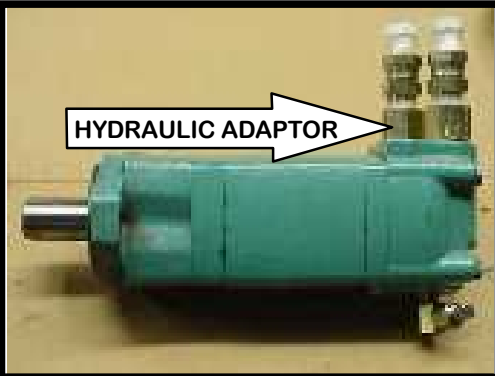
**SET SHAFT BEARING
(NOT SHOWN ON MAIN
PICTURE, LOCATED ON
OTHER SIDE OF
SPROCKET)

PART # 01-D-095**



**MUSHROOM KEEPER
PART # 28-A-092**

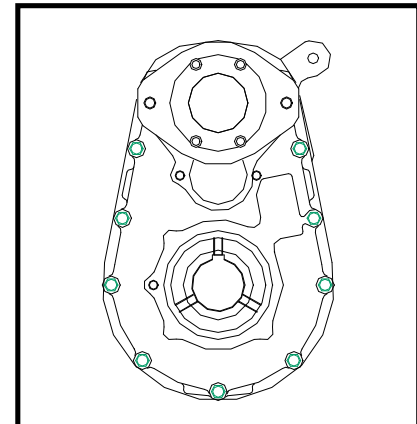
CARRIAGE PARTS GEAR BOX DRIVE PARTS



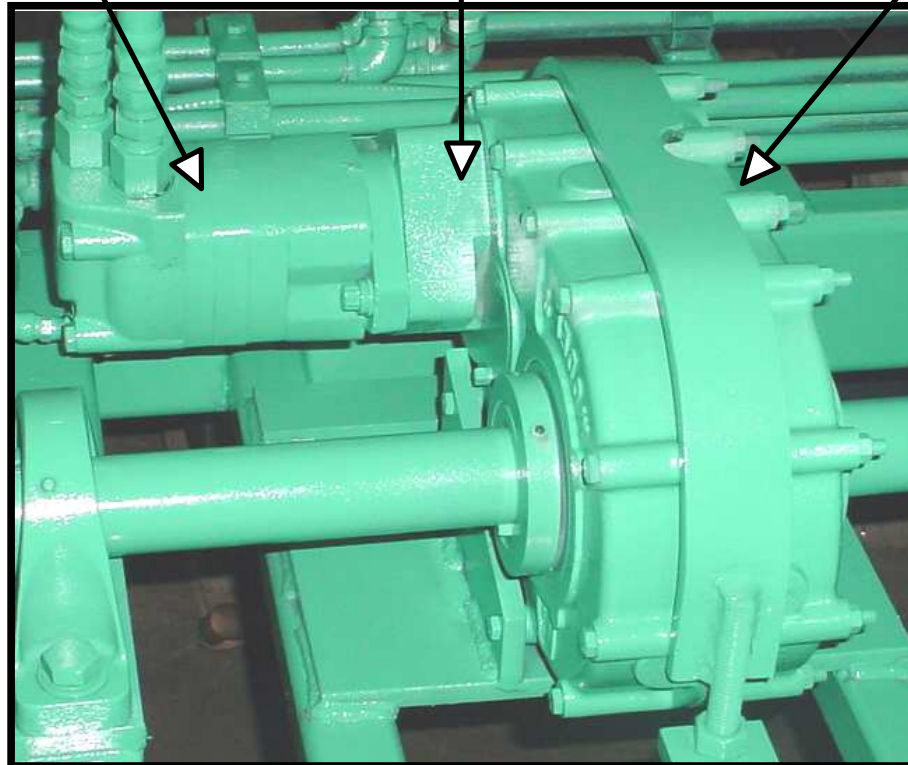
HYDRAULIC ADAPTOR

HYDRAULIC MOTOR
PART # 20-B-130
CASE DRAIN FITTING
PART # 13-E-007
HYDRAULIC ADAPTOR
PART # 21-L-050

FLANGE FOR MOTOR
PART # 21-L-037

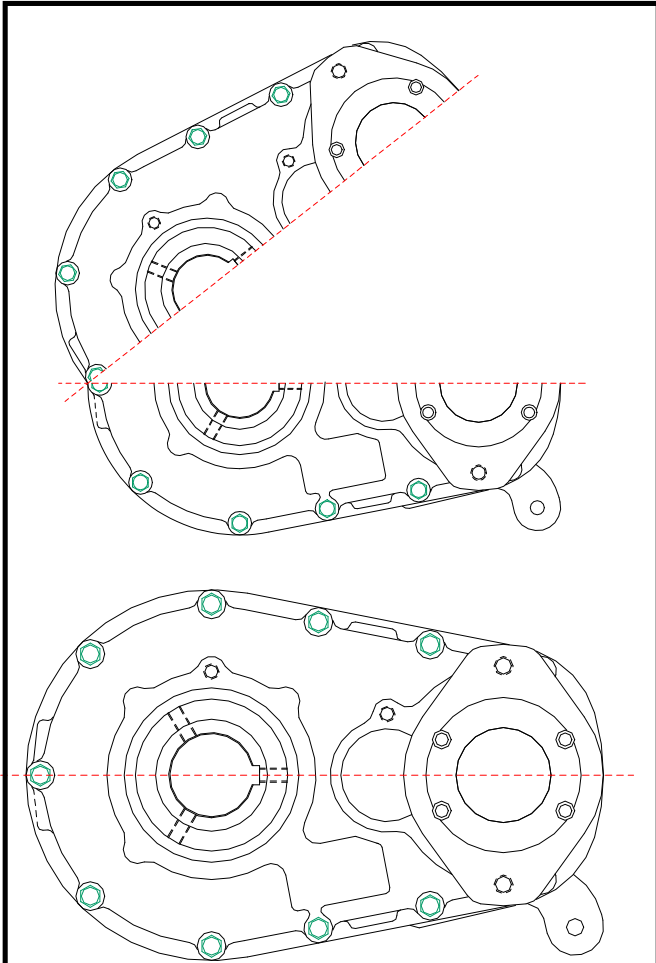
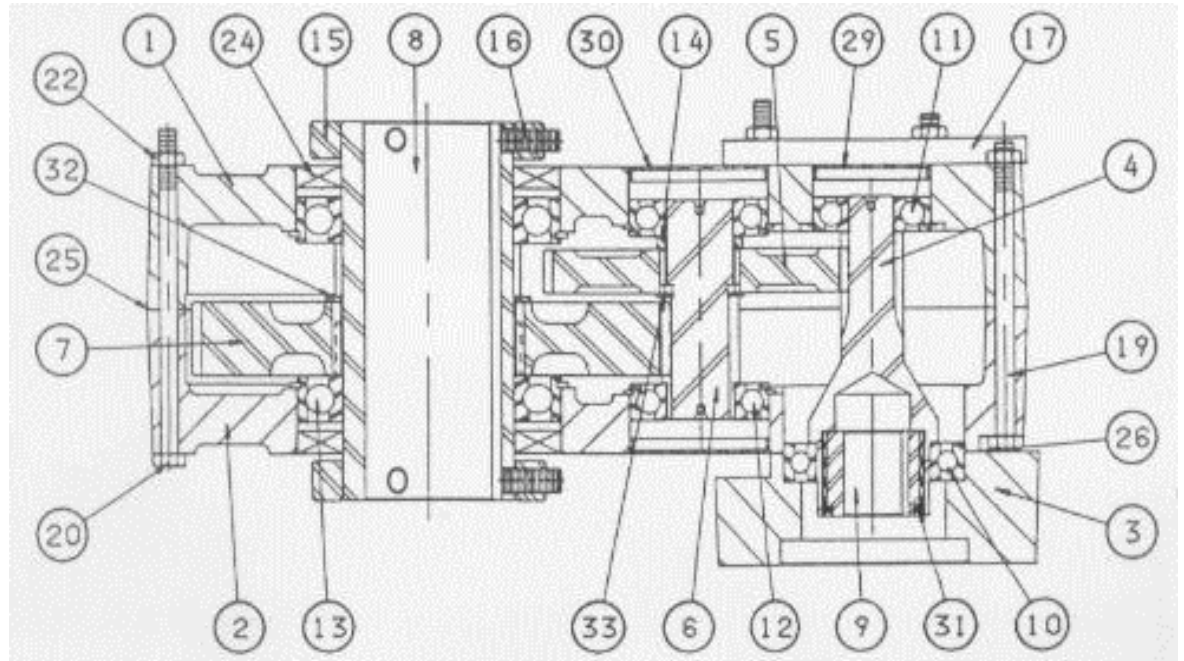


GEAR BOX COMPLETE
PART # 12-M-020



CARRIAGE PARTS

GEAR BOX PARTS



#	DESCRIPTION	PART #
3	FLANGE HYDRAULIC MOTOR	21-L-037
4	PINION, INTG. SPUR. PRIMARY	12-M-136
5	GEAR SPUR PRIMARY	12-M-137
6	PINION, INTG. SPUR, SECONDARY	12-M-135
7	GEAR, SPUR, SECONDARY	12-M-140
8	SLEEVE, LOW SPEED	15-C-012
9	BUSHING HIGH SPEED	21-L-038
10	BALL BEARING	01-D-142
11	BALL BEARING	01-B-084
12	BALL BEARING	01-C-105
13	BALL BEARING	01-D-904
15	LOCKING COLLAR	04-E-028
25	GASKET	24-B-014
26	GASKET	24-B-013
27	GASKET	24-B-009
30	PLUG	24-B-200

NOTE: THE DIAGRAM IS A CUT AWAY VIEW OF THE GEAR BOX. THE CUT LINE IS THE RED LINE SHOWN IN THIS PICTURE. THE VIEW IS LOOKING DOWN ON GEAR BOX FROM THE TOP. THE SET SHAFT ON THE CARRIAGE GOES THROUGH THE SLEEVE "8". THE HYDRAULIC MOTOR CONNECTS TO FLANGE "3".

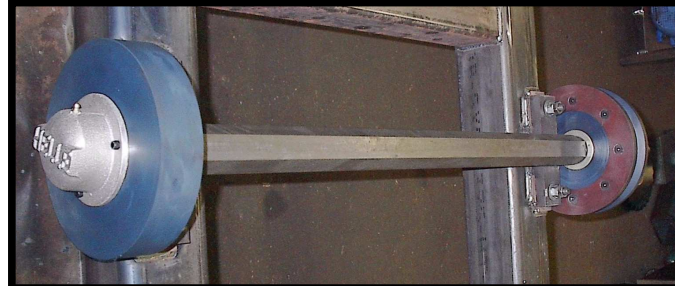
CARRIAGE PARTS

2" HEX AXLE

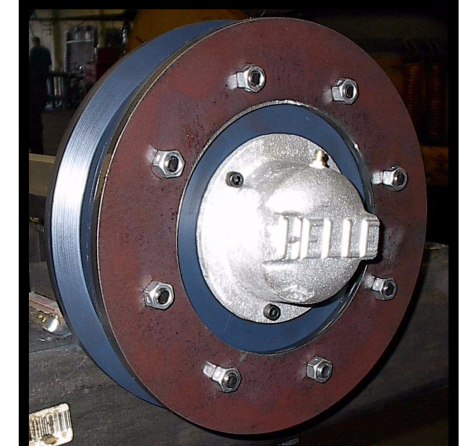
WHEEL AND AXLE PARTS



FLAT WHEEL
 PLASTIC PART #04-K-090P
 STEEL PART # 04-K-090



HEX AXLE
 PLEASE CALL THE FACTORY AT
 1-800-245-2448 TO ORDER. PLEASE
 HAVE RAIL GAUGE WHEN ORDERING.



GROOVED WHEEL
 PLASTIC PART # 04-K-075P
 STEEL PART #04-K-075



NUT
 PART #18-B-036



PIN
 PART # 06-B-316

OUTSIDE WHEEL PARTS



QTY	DESCRIPTION	PART #
3	BOLTS	NB-A-17A
1	HUB CAP	04-K-065
1	GASKET	24-B-026
1	BEARING	01-D-907
1	RACE	01-D-908

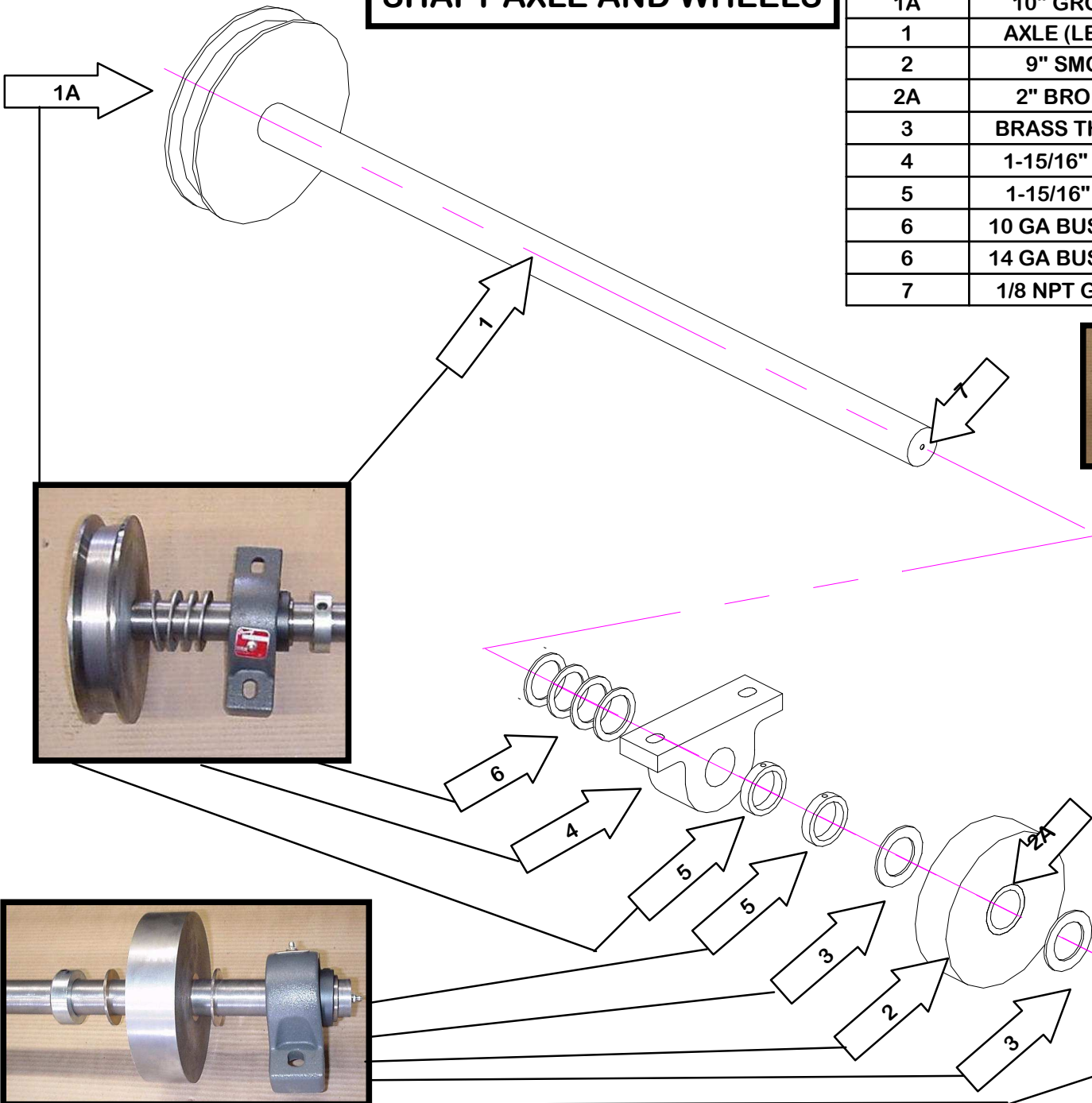
INSIDE WHEEL PARTS



QTY	DESCRIPTION	PART #
1	SEAL	24-F-106
1	BEARING	01-D-907
1	RACE	01-D-908

CARRIAGE PARTS SHAFT AXLE AND WHEELS

ITEM #	DESCRIPTION	PART #
1A	10" GROOVED WHEEL	04-K-075
1	AXLE (LENGTH VARIES)	CALL 1-800-245-2448
2	9" SMOOTH WHEEL	04-K-090
2A	2" BRONZE BUSHING	03-D-010
3	BRASS THRUST WASHER	04-J-86
4	1-15/16" AXLE BEARING	01-D-085
5	1-15/16" SET COLLARS	25-B-020
6	10 GA BUSHINGS (NEED 3)	13-A-106
6	14 GA BUSHINGS (NEED 1)	13-A-104
7	1/8 NPT GREASE FITTING	19-A-158



NOTE: PARTS 1 & 1A
-10" WHEEL & AXLE SOLD AS ONE. WHEEL IS PRESSED ON THEN WELDED. THIS IS NOT SOMETHING THAT CAN BE DONE IN THE FIELD.
-WHEN ORDERING PLEASE HAVE RAIL GAUGE READY.

CARRIAGE PARTS

PUMPING UNIT PARTS



SHUT-OFF
PART #
31-B-010

****PUMP**

Seal Kits

If you have a Vickers Pump you need

Part # 24-E-155

If you have a Eaton Pump you need

Part # 24-E-575

Replacement Pump

If you have a Vickers Pump and want to replace it with a Eaton you will need a new case drain(Part # 21-L-069)

How can I tell the difference?

The case drain on Vickers pump is located on the top and on the Eaton is located on the side.

!!IMPORTANT!

Your pump is made of aluminum. The case drain thread is rather fragile. **DO NOT GET BRAVE.** Just tighten kind of snug, and hold it there while you hook the hose, swivel, or whatever to this fitting. If you get too brave, you will strip out the thread.

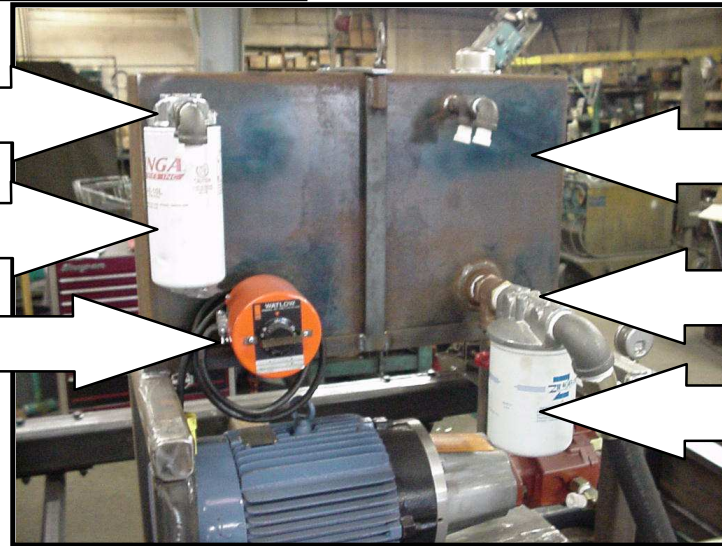
If your carriage has a roller chain coupling on a 10HP motor your part numbers are:

PUMP SIDE COUPLING HUB 06-E-013

MOTOR SIDECOUPLING HUB 06-E-006

CHAIN COUPLER 06-B-005

For 15 hp motors please call the factory at 1-800-245-2448



FILTER HEAD
PART # 10-A-080

RETURN FILTER
PART # 10-A-100

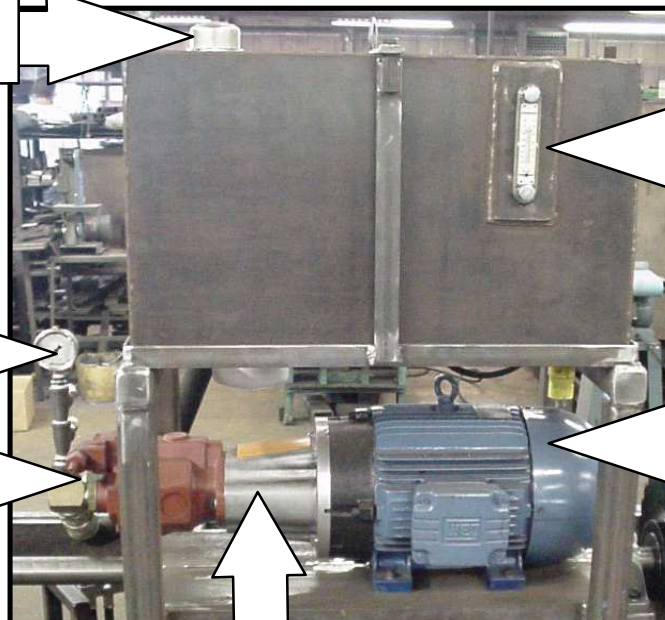
HEATER
PART # 04-J-87A

TANK
PART # 04-F-015

FILTER HEAD
PART # 10-A-090

SUCTION FILTER
PART # 10-A-095

TANK CAP
PART #11-A-005



PRESSURE GAUGE
PART # 11-A-037

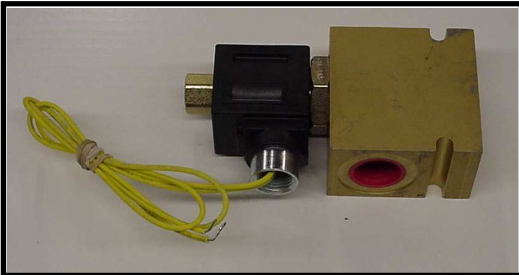
PUMP**
PART # 22-A-078

GLASS GAUGE
PART # 11-A-031

10 HP MOTOR
PART # 20-A-044
15 HP MOTOR
PART # 20-A-078C

10HP PUMPING UNITS		15 HP PUMPING UNITS	
ALUMINUM ADAPTOR	PART #21-L-027	ALUMINUM ADAPTOR	PART #21-L-500
PUMP COUPLING HUB	PART # 06-E-105	MOTOR COUPLING HUB	PART # 06-F-110
MOTOR COUPLING HUB	PART # 06-E-110	PUMP COUPLING HUB	PART # 06-F-100
COUPLING INSERT	PART # 06-E-115	COUPLING INSERT	PART # 06-F-085

CARRIAGE PARTS VALVES

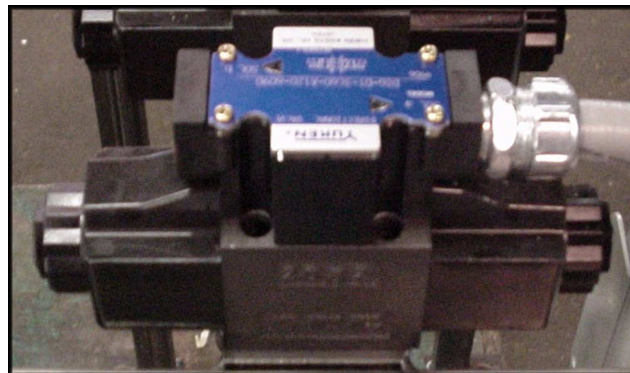


CARTRIDGE VALVE
Part #31-B-340
COIL
Part # 08-C-141



VICKERS VALVE

	PART #
COMPLETE FULL VALVE	31-B-115
COMPLETE HALF VALVE	31-B-110
ELECTRIC COIL	08-C-025
O-RING SEAL KIT	24-E-065
GASKET + O-RING SEAL KIT	24-E-151



NORTHMAN VALVE

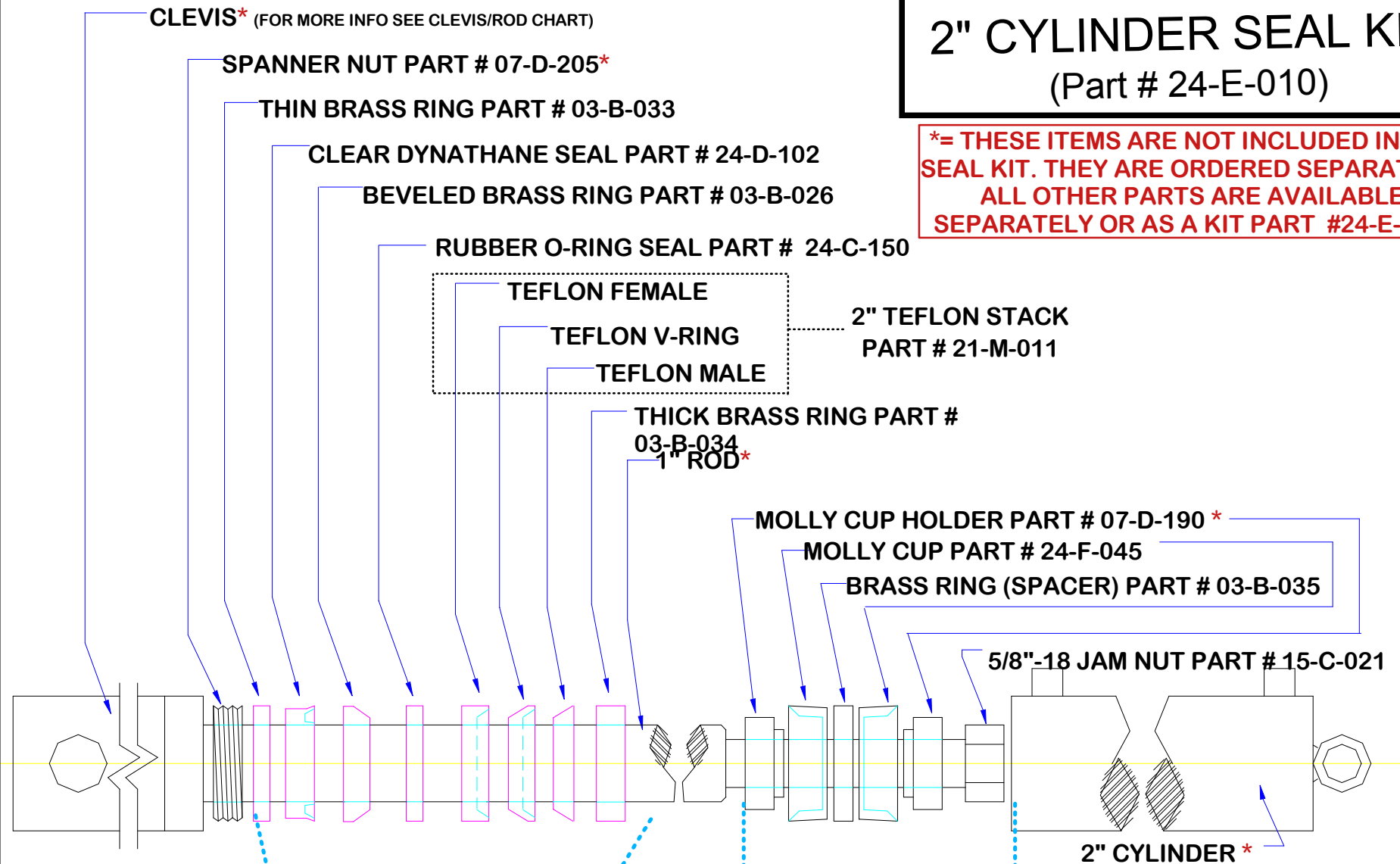
	PART #
COMPLETE FULL VALVE	31-B-133
COMPLETE HALF VALVE	31-B-134
ELECTRIC COIL	08-C-145
O-RING SEAL (requires 5)	24-C-165

YUKEN VALVE

	PART #
COMPLETE FULL VALVE	31-B-133Y
COMPLETE HALF VALVE	31-B-134Y
ELECTRIC COIL	08-C-170
O-RING SEAL (requires 5)	24-C-165

2" CYLINDER SEAL KIT (Part # 24-E-010)

***= THESE ITEMS ARE NOT INCLUDED IN THE SEAL KIT. THEY ARE ORDERED SEPARATELY. ALL OTHER PARTS ARE AVAILABLE SEPARATELY OR AS A KIT PART #24-E-010.**

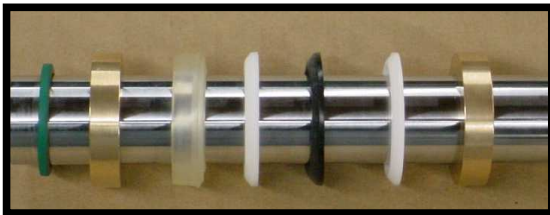
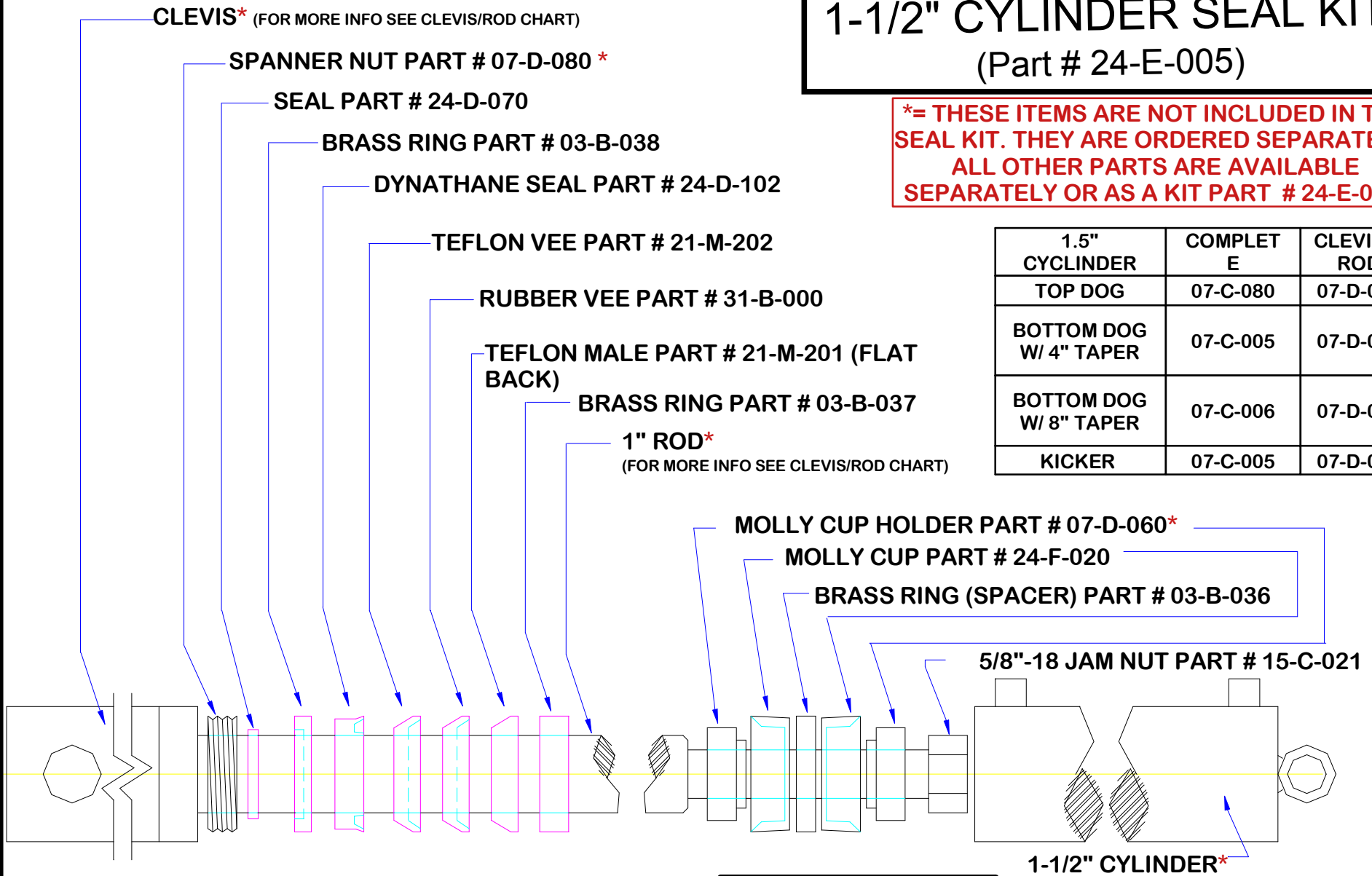


2" CYLINDER	COMPLET E	CLEVIS & ROD
4" TAPER	07-C-070	07-D-155
8" TAPER	07-C-075	07-D-165
10" FLIPPER	07-C-015	07-D-130
12" FLIPPER	07-C-020	07-D-140
HAMMER DOG	07-C-021	07-D-021

1-1/2" CYLINDER SEAL KIT (Part # 24-E-005)

***= THESE ITEMS ARE NOT INCLUDED IN THE SEAL KIT. THEY ARE ORDERED SEPARATELY. ALL OTHER PARTS ARE AVAILABLE SEPARATELY OR AS A KIT PART # 24-E-005.**

1.5" CYCLINDER	COMPLET E	CLEVIS & ROD
TOP DOG	07-C-080	07-D-045
BOTTOM DOG W/ 4" TAPER	07-C-005	07-D-037
BOTTOM DOG W/ 8" TAPER	07-C-006	07-D-039
KICKER	07-C-005	07-D-037





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