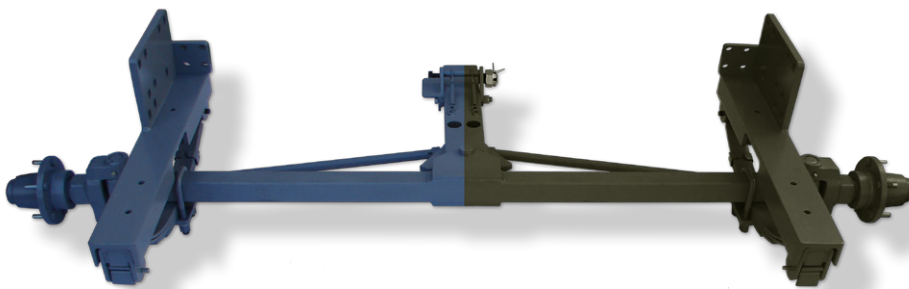




*"Turn to Hadco for Quality Running Gear"*

# Running Gear & Axle Parts Master Catalog



## Corporate Office

2915 E. Ricker Way

Anaheim, CA. 92806

Phone: (951) 278-1952

Fax: (951) 278-1954

[www.hadcoengineering.com](http://www.hadcoengineering.com)

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# THE COMPANY



Since 1945 Hadco has produced a full line of axle and brake assemblies and components for thousands of light and heavy-duty vehicle applications. Automotive-type steerable axle configurations, single and dual-wheel units with load bearing capacities up to 18,000 pounds per axle. These are just part of Hadco's diversified line of products. In addition to complete assemblies, we also sell a full line of individual parts and components for repair of existing equipment or manufacture of new equipment.

Over the years Hadco has served hundreds of original equipment manufacturers producing vehicles ranging from light-duty boat trailers through multi-axle, heavy-duty farm wagons. We maintain a staff of highly trained and experienced engineers, thoroughly knowledgeable in both our products and our customers' problems, to assist our customers in the selection of components that will give maximum performance at minimum cost.

You can count on Hadco to provide high-quality products that are tailored to your needs, competitively priced, and delivered on schedule. Your inquiries for technical assistance and quotations are cordially invited and will receive prompt attention.



# **CUSTOMER SERVICE**

If you would like to speak to a customer service representative for order, delivery, or billing related issues, please call the numbers below during the listed hours. If you have online order inquiries, questions, or feedback, please fill out the form below and submit it to us. Or, you may also use the links below to reach the appropriate department directly.

**1-951-278-1952 • M-TH 8:00 a.m. - 4:30 p.m. PST.**

**Or fax 1-951-278-1954.**

## **E-MAIL**

**[sales@hadcoengineering.com](mailto:sales@hadcoengineering.com)**

## **WEB ADDRESS**

**[www.hadcoengineering.com](http://www.hadcoengineering.com)**

## **MAIL DELIVERY**

**Office: P.O. Box 18713**

**Anaheim, CA. 92817-8713**

**Mfg./Ship/Receiving:**

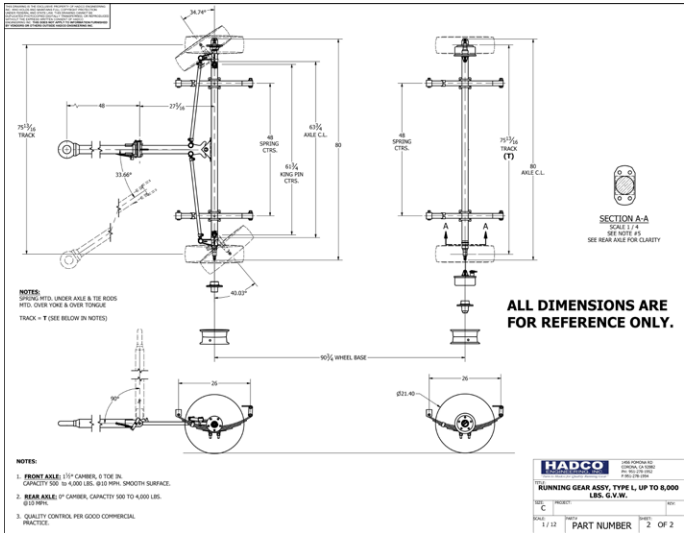
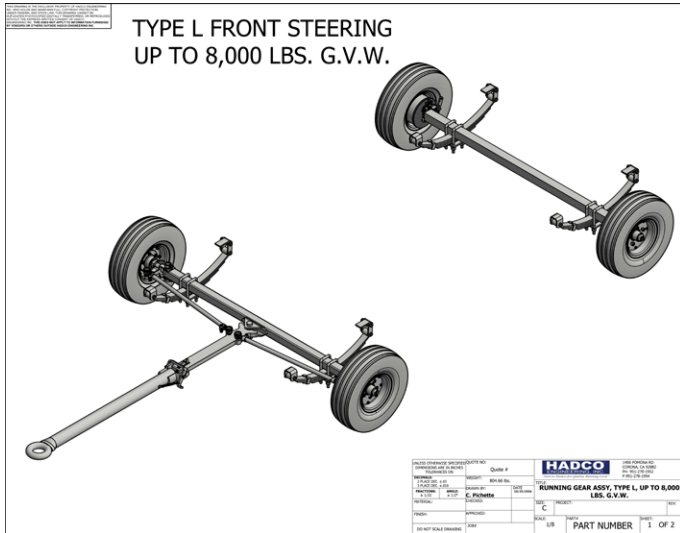
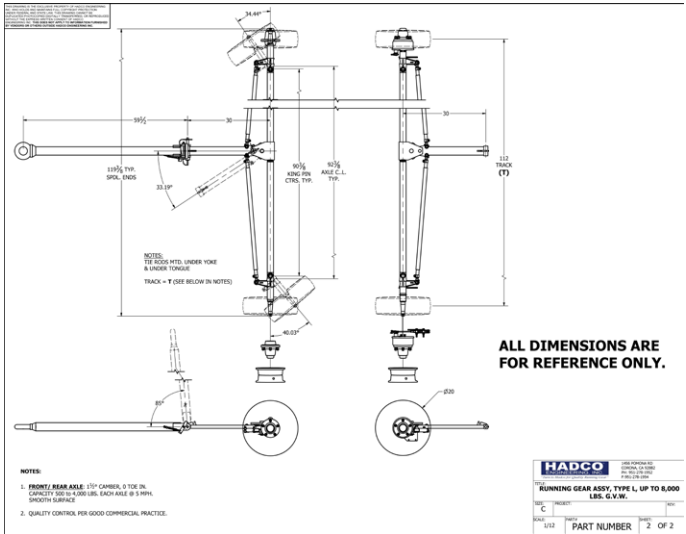
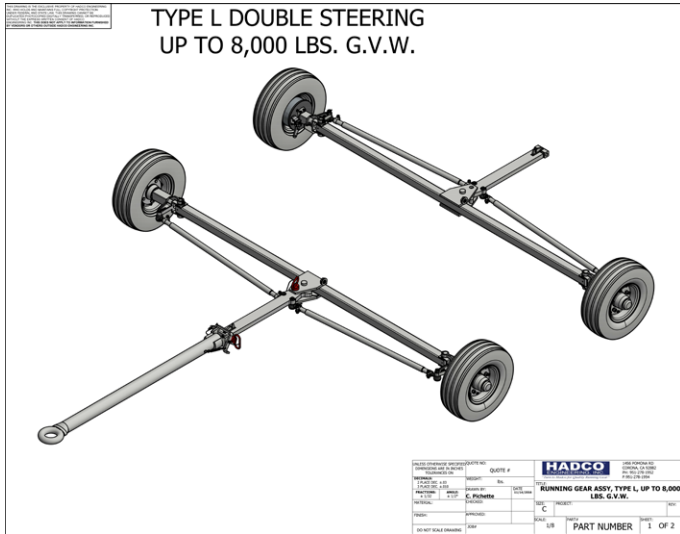
**2915 E. Ricker Way**

**Anaheim, CA. 92806**

# LIGHT DUTY RUNNING GEAR

## TRAILER TYPE L

Capacities from 500 to 4,000 lbs. per axle, front mounted tie-rods. The type "L" unit is normally used where low initial cost and design simplicity are of paramount importance. This type "L" front steering axle is especially suited for low speed interplant and low speed runway type use. The typical corresponding rear axle for the type "L" front steering axle can accommodate many different types of springs, brakes, hubs, wheels and tires for this front and rear axle assembly. Different capacity rear and front axles may be used when necessary.



## SOME SAMPLE RUNNING GEAR COMBINATIONS

TIRE	WHEEL	HUB	HUB& DRUM	FTR&RR BRAKE	K	S	W	R
4.10/3.50X6	540400	522890		None	T-13	T-19	T+4-1/4	T-9
4.80/4.00X8	540403	522890		None	T-12-1/8	T-20	T+5	T-9
4.80/4.00X8	540403		525429	519538	T-20-5/8	T-22	T+5	T-12
6.90/6.00X9	540406	525483		None	T-13	T-24	T+6-1/2	T-11
6.90/6.00X9	540406		525487	519538	T-20	T-25	T+8-5/8	T-18
7.50X10	540409	525483		None	T-13	T-26-1/2	T+8-5/8	T-14
7.50X10	540409		525487	519538	T-20	T-29	T+8-5/8	T-18
7.75X15	540448	521004		None	T-13	T-29	T+8	T-14

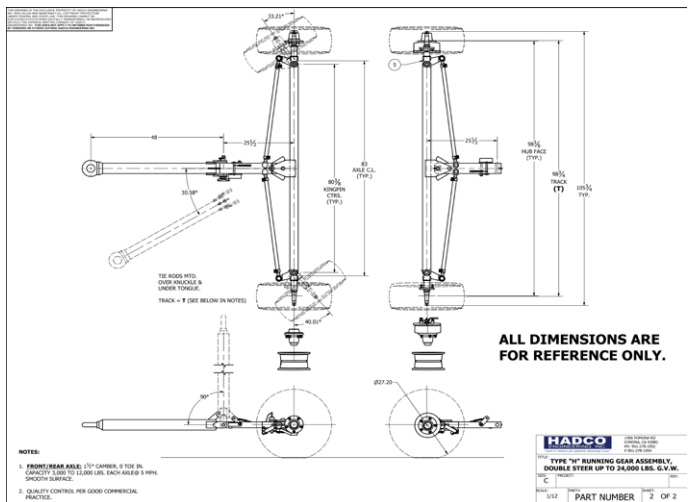
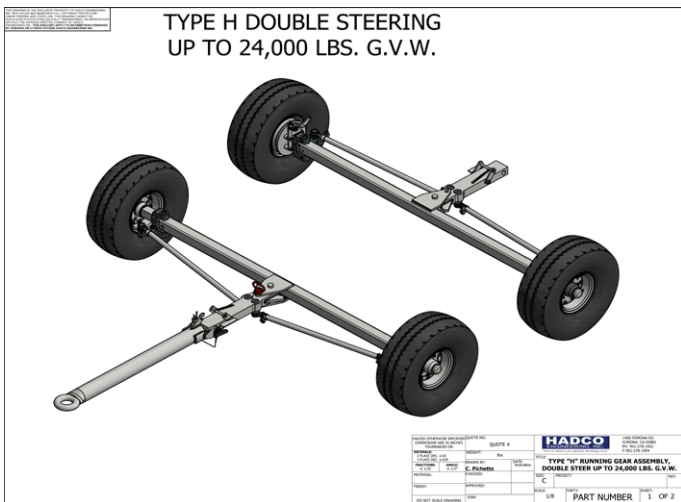
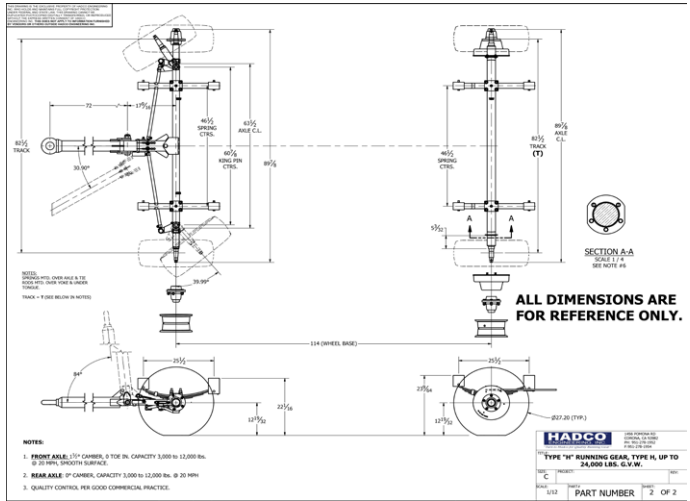
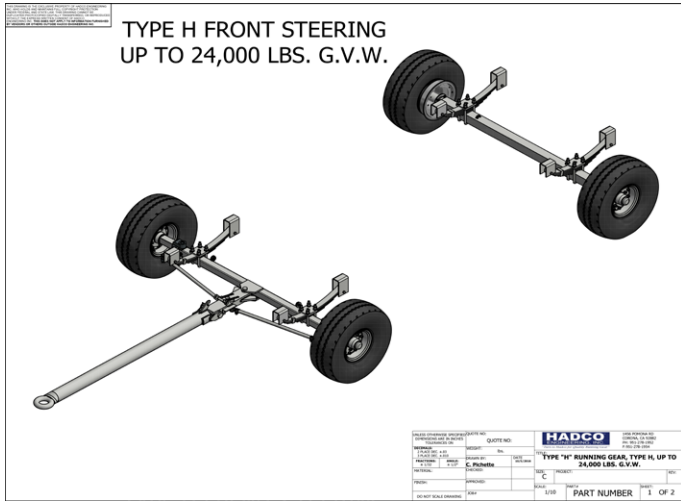
## DESIGN NOTES

When a drawbar latch is required the tongue length must be sufficient so that the drawbar is attached in front of the frame. MIL-M-8090 requires the drawbar to be raised at any possible cramping or turning angle of the tongue.

# MEDIUM DUTY RUNNING GEAR

## TRAILER TYPE H

Capacities from 3,000 to 12,000 lbs. per axle, front mounted tie-rods. The type "H" has the major advantage of the type "L" units, such as simplicity of design, low maintenance costs, ease of handling and great adaptability. Type "H" is especially well engineered for heavy duty, rough terrain and extended service life. This type "H" front steering axle is suited for all speeds, both on and off highway, on smooth, rough and extremely rough terrain. The type to order if your unit will encounter rough military or heavy commercial type use. The typical corresponding rear axle for type "H" front steering axle can accommodate many different types of springs, brakes, brake systems, hubs, wheels and tires for this front and rear axle assembly. Different capacity rear and front axles may be used when necessary.



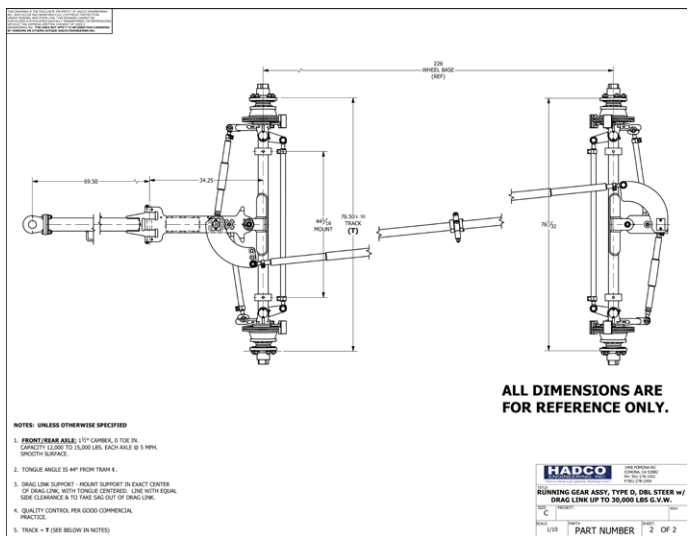
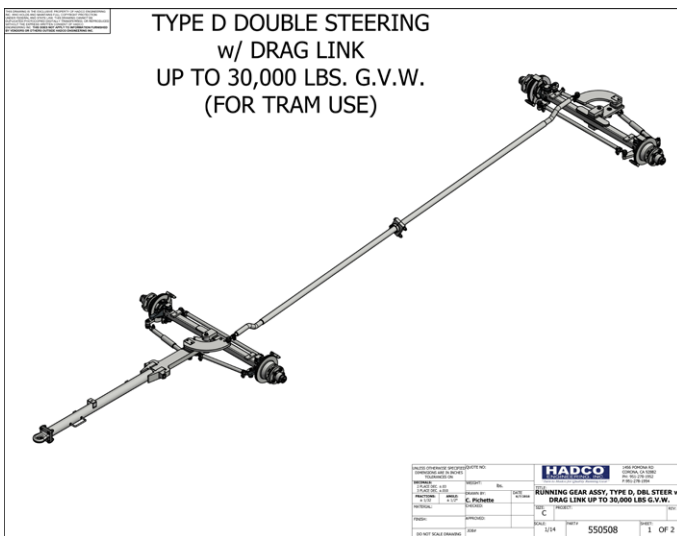
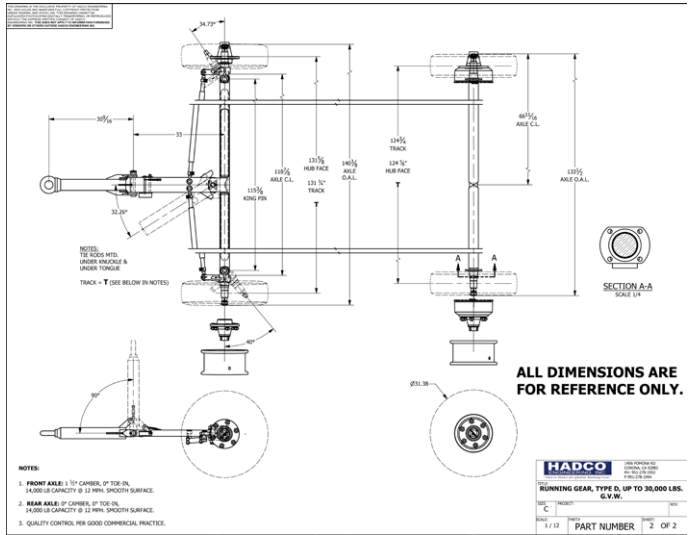
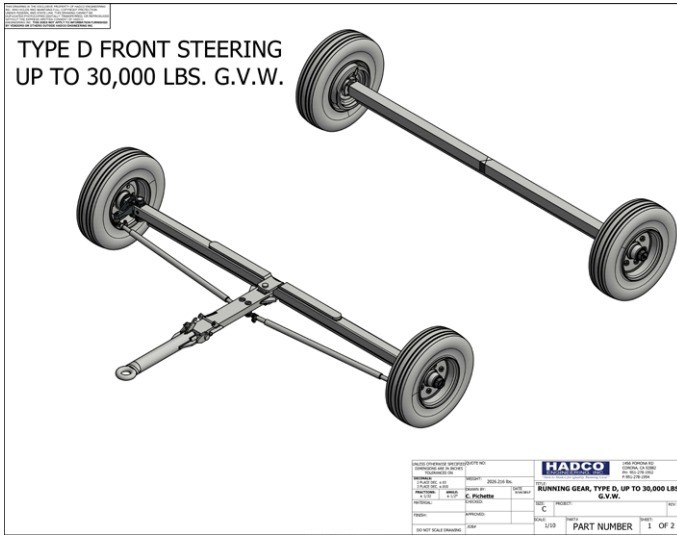
## SOME SAMPLE RUNNING GEAR COMBINATIONS

TIRE	WHEEL	HUB	HUB& DRUM	FTR&RR BRAKE	K	S	W	R
5.00X8	540402	522460		NONE	T-13-13/16	T-22	T+6	T-11
5.00X8	540402		525431	519538	T-19-5/16	T-23	T+6	T-18
6.90/6.00X9	540406	525483		NONE	T-14-1/2	T-24	T+6-1/2	T-12
6.90/6.00X9	540406		525487	519538	T-19-1/2	T-26	T+6-1/2	T-17
7.50X10	540409	525483		NONE	T-16	T-29	T+8-1/2	T-13
7.50X10	540409		525487	519538	T-19-1/2	T-29	T+8-1/2	T-17
7.50X10	540409		525487	519570-1	T-22	T-30	T+8-1/2	T-15
7.50X10	540958	---	525500-1	519739	T-21-1/2	T-30	T+9-1/2	T-27
519741								
9.00X10	540409	525483		NONE	T-17	T-31	T+9-1/2	T-14
9.00X10	540409		525487	519536	T-19-1/2	T-31	T+9-1/2	T-17
9.00X10	540409		525487	519570-1	T-22	T-32	T+9-1/2	T-21
7.50X15	540291		525410-1	519830-1	T-23-7/8	T-35	T+7-5/8	T-22
9.00X15	540390		525410-1	519830-1	T-23-7/8	T-38	T+7-5/8	T-22
7.50X15	540291		525414-5	518178	T-18-7/8	T-34	T+7-7/8	T-18
				518179				

# HEAVY DUTY RUNNING GEAR

## TRAILER TYPE D

Capacities from 18,000 lbs. per axle, front mounted tie-rods. Type "D" running gear is designed for heavy loads in rugged service and off-highway use. This type "D" front steering axle is suited for all speeds, both on and off the highway, on smooth rough and extremely rough terrain. The type to order if your unit will encounter rough military or heavy commercial type use, requiring capacities exceeding type "H" running gear. The typical corresponding rear axle for the type "D" front steering axle can accommodate different types of springs, brakes, brake systems, hubs, wheels and tires are available for this front and rear axle assembly. Different capacity rear and front axles may be used when necessary.



## SOME SAMPLE RUNNING GEAR COMBINATIONS

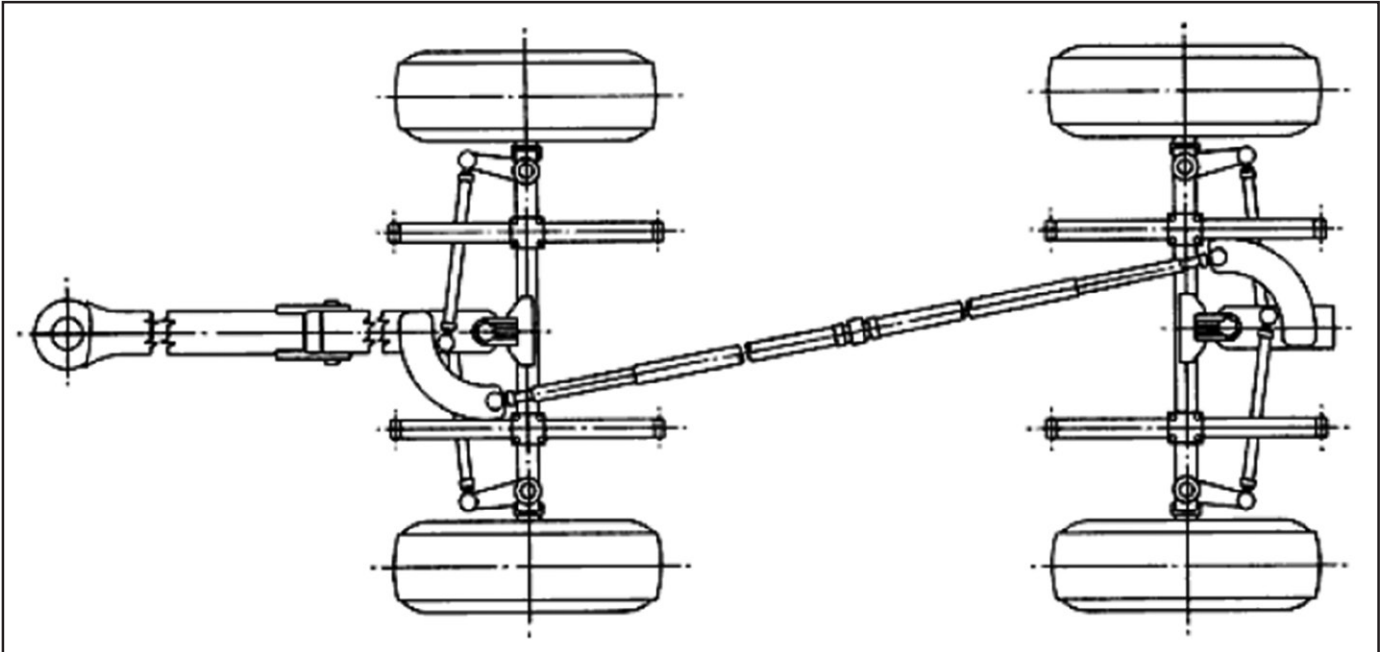
CONFIGURATION	TIRE	WHEEL	HUB	HUB&DRUM	FRNT&RR BRAKE	K	S	W	R
Singles-Front/Rear	7.50X15	540291	522880-1		NONE	T-14	T-32	T+8-1/2	T-12-1/2
Singles-Front			522882-3						
Duals-Rear	7.50X15	540300	522845-6		NONE	T-15-1/4	T-33	T+18-5/8	T-24
Singles-Front/Rear	7.50X15	540291		525410-1	519830-1	T-27	T-35	T+8-1/2	T-24
Singles-Front/Rear	9.00x16	540216		522410-1	519830-1	T-27	T-37	T+9-7/8	T-24
Singles-Front/Rear	9.00x16	540309		525422-3	519830-1	T-27	T-38	T+10-3/8	T-24 *

## DESIGN NOTES

When a drawbar latch is required the tongue length must be sufficient so that the drawbar is attached in front of the frame. MIL-M-8090 requires the drawbar to be raised at any possible cramping or turning angle of the tongue.

# CUSTOM ENGINEERING SERVICE

Running gear is an integral part of a total system that is designed to do a specific job in the most efficient, cost-effective manner possible. Hadco maintains an engineering Department to ensure that your new trailer designs or modified designs incorporate the ideal running gear for their purpose. Our engineers will work with you to custom-tailor a Hadco system to meet your specific requirements.



## ENGINEERING SERVICES

- Evaluate specific customer requirements.
- Coordinate with or directly support customer engineering and manufacturing personnel during design, specifications, production engineering and manufacturing phases of trailer development.
- Make engineering blueprints, specifications, and other data available for customer use.
- Coordinate with customer to facilitate integration of Hadco systems into assembly.

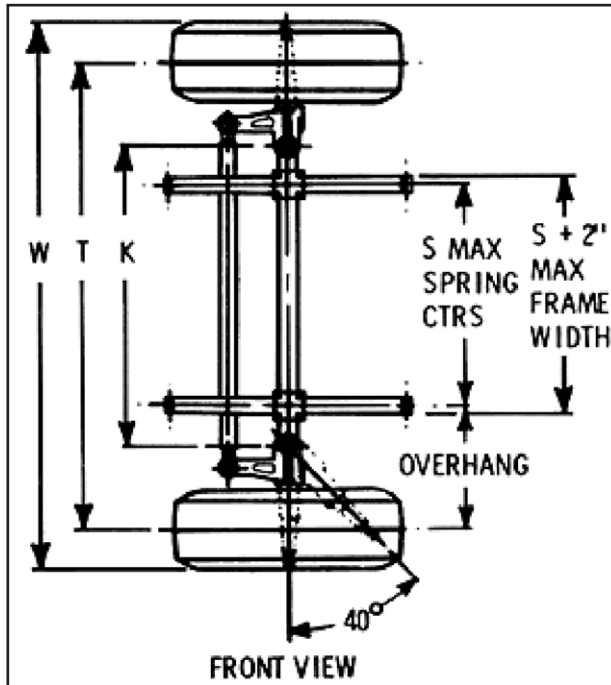
# SELF-PROPELLED RUNNING GEAR

## SELF-PROPELLED STEERING AXLE - LAYOUT

*SPEEDS NOT TO EXCEED 20 M.P.H.*

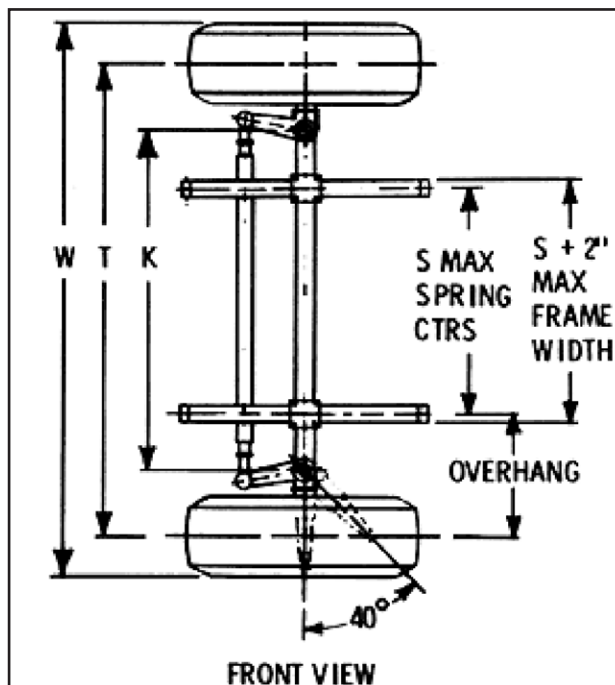
### TYPICAL LAYOUT FOR TYPE "H"

Capacities from 3,000 to 12,000 lbs per axle, front mounted tie rods.  
Consult trailer running gear section for dimensions.



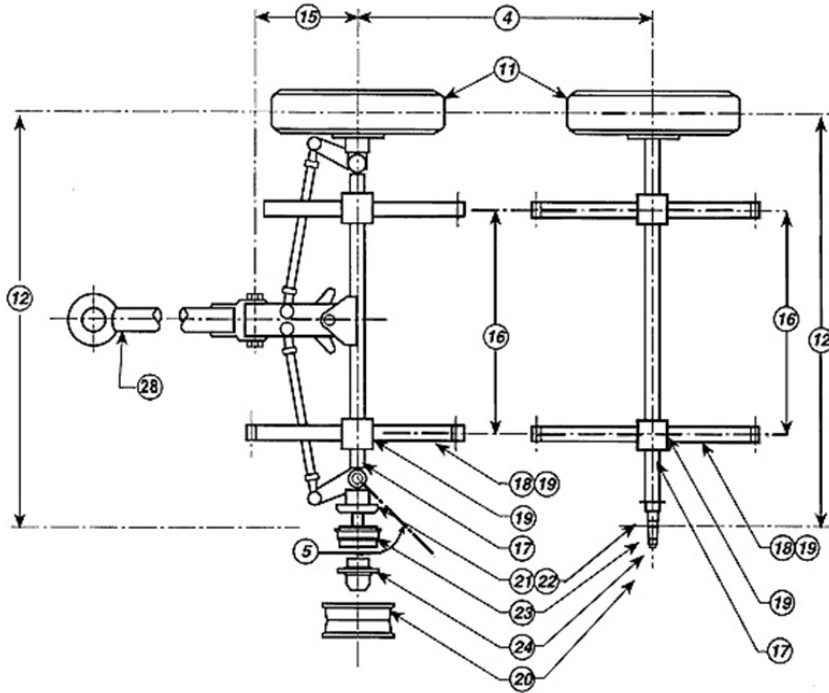
### TYPICAL LAYOUT FOR TYPE "D"

Capacities from 18,000 lbs per axle, front mounted tie rods.  
Consult trailer running gear section for dimensions.



# ORDER / QUOTE FORM (PART 1)

N/A OR CHECK "NONE"  
FOR ITEMS NOT WANTED



**Ordering Diagram**

1.	MIL. SPECS: <input type="checkbox"/> APPLICABLE or <input type="checkbox"/> COMMERCIAL
2.	ROAD SURFACE: _____
3.	TOWING SPEED: _____ M.P.H. MAX.
4.	WHEEL BASE: _____
5.	TURNING CRAMPING ANGLE: <input type="checkbox"/> 40 DEGREES or <input type="checkbox"/> SPECIAL:
6.	DISTANCE FROM THE FRONT AXLE TO FRONT OF FRAME _____ INCHES
7.	FRAME: <input type="checkbox"/> OVER TIRES or <input type="checkbox"/> BETWEEN TIRES
8.	DRAWBAR LATCH: <input type="checkbox"/> YES <input type="checkbox"/> NO
9.	STEERING AXLE CAPACITY: _____ LBS
10.	REAR AXLE CAPACITY: _____ LBS
11.	TIRE SIZE: _____ / _____ PLY
12.	TRACK: _____ INCHES
13.	FRAME WIDTH: _____ OUTSIDE DIM.
14.	OVERALL WIDTH: _____ OUTSIDE TIRES
15.	TONGUE LENGTH: _____
16.	SPRING CENTERS: FRONT _____ REAR _____
17.	AXLE SIZE TYPE: FRONT _____ REAR _____
18.	SPRING: FRONT _____ REAR _____  MOUNTING: <input type="checkbox"/> OVER AXLE <input type="checkbox"/> UNDER AXLE <input type="checkbox"/> NONE
19.	SPRING FITTINGS: <input type="checkbox"/> NONE FRONT _____ REAR _____
20.	WHEELS: _____ <input type="checkbox"/> NONE
21.	PARKING BRAKES: FRONT _____ REAR _____
22.	SERVICE BRAKES: FRONT _____ REAR _____
23.	BRAKE DRUMS: FRONT _____ REAR _____
24.	HUBS: FRONT _____ REAR _____
25.	PARKING BRAKE LINKAGE: A DIM: _____ B DIM: _____ C DIM: _____ D DIM: _____ E DIM: _____ NONE: <input type="checkbox"/> ( See Catalog Brake Linkage Section )
26.	SERVICE BRAKE ACTUATING KIT: _____
27.	HYDRAULIC LINE & FITTING KIT: _____
28.	DRAWBAR LENGTH: <input type="checkbox"/> STANDARD 48" or <input type="checkbox"/> SPECIAL
29.	PAINT: <input type="checkbox"/> PRIME PER MIL-P-8585 A ONLY <input type="checkbox"/> COMMERCIAL PRIME ONLY

# ORDER / QUOTE FORM (PART 2)

SPECIAL FEATURES & ACCESSORIES:

RUNNING GEAR WILL BE USED ON:  
(SPECIFY TYPE OF EQUIPMENT)

WE EXPECT TO USE  QUANTITIES OF THESE UNITS:

DELIVERIES AS FOLLOWS:

COMPANY: \_\_\_\_\_ COUNTRY: \_\_\_\_\_

NAME: \_\_\_\_\_ ZIP: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

CITY: \_\_\_\_\_ FAX: \_\_\_\_\_

STATE: \_\_\_\_\_ EMAIL: \_\_\_\_\_



# TRAILER AXLES

Hadco axles are manufactured from the finest quality C1040 hot rolled steel. When greater strength is required due to excessive overhang, axles can be made on special order from 4140 hot rolled alloy steel. Axle spindle dimensions are shown in hub series section. Axle capacity cannot exceed the spindle capacity. All axles are furnished complete with spindle nuts, washers and cotter pins, and Z rings where required.

## CAPACITY

All axle and axle component capacities are based upon gross load measured at the ground.

## CAMBER

All Hadco straight axles over 70 inches long (2&1/4" sq or less) will be cambered 1&1/2° (Nominal) at center unless otherwise requested. Steering axles are cambered 1&1/2° (Nominal) at the spindle. All dropped axles are cambered 1&1/2° (Nominal) at the drop.

## TRACK

Track is the distance in inches from tire centerline to tire centerline on axle assemblies with single tires. On duals, track is measured at the centerline between the dual tires.

## TRACK VS. AXLE LENGTH

A = distance from outside of hub flange to end of axle in inches.  
(See drawings on hub series pages for this dimension.)

Dish= the distance between the centerline of the tire and the hub face in inches.

(May be positive or negative. Positive dish is shown at right.)  
(See wheel charts for this dimension.)

Difference between track and axle length

=  $2A + 2 \text{ Dish}$  (positive dished wheels)

=  $2A - 2 \text{ Dish}$  (negative dished wheels)

Difference between track and axle length is shown in hub series charts.

## TRACK VS. OUTSIDE TIRE WIDTH

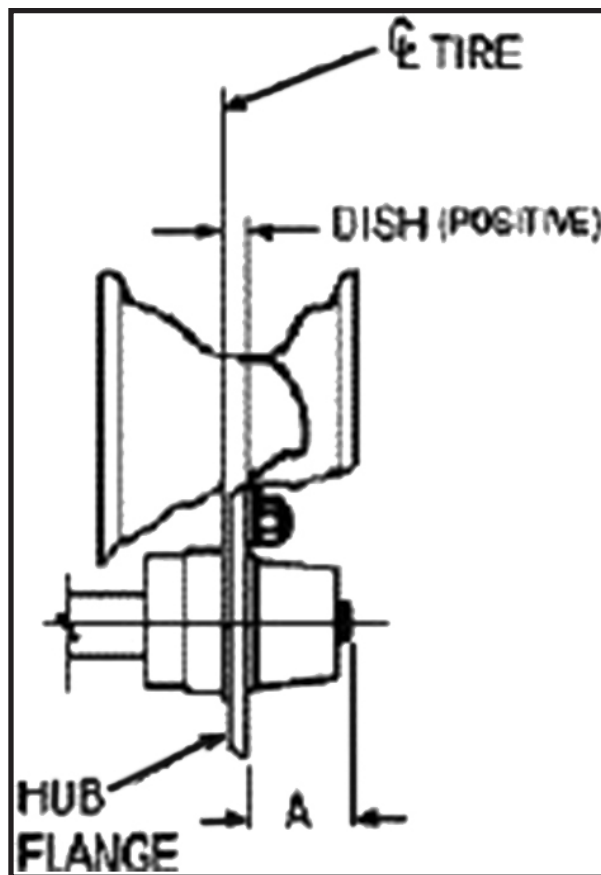
Outside tire width of axle assemblies with single tires is track plus the width of one tire plus one (1) inch allowance for camber.

## OVERHANG

Overhang for axles with single tires is the distance from the centerline of the spring to the centerline of the tire. Overhang for axles with dual tires is the distance from the centerline of the spring to the centerline of the duals.

## OVERHANG VS. AXLE CAPACITY

Axle beam carrying capacity is reduced as the overhang is increased. See Axle Beam



# IMPORTANT SAFETY INFORMATION

HADCO products are designed with a margin of safety that years of analysis and experience has shown to be more than adequate for their rated capacities, in the service specified. Operation at higher-than-rated speeds or on a terrain or in a service other than specified, overloading, using mismatched components or excessive axle overhang, neglecting to maintain correct tire inflation, or the recommended lubrication frequency, can cause sudden failures with possible serious consequences.

We recommend that maximum speed and payload, correct tire inflation pressure, wheel bolt (lug nut) torque and bearing maintenance information be displayed along with other safety information in a conspicuous place on the completed vehicle. Care should be taken to assure equal side-to-side loading.

Designers not familiar with factors influencing the stability of towed vehicles (especially at high speed) should contact Hadco Engineering early in the design stage since this stability is dependent on chassis dimensions and weight distribution. Anticipated extremes of terrain or operating conditions must be brought to the attention of Hadco's Engineering Department.

## HOW TO DETERMINE CAPACITIES

**Capacity, in all cases, refers to the load measured at the ground.**

### ASSEMBLIES

In assembling running gear components, it is desirable to match the capacities of the axle, tires, wheels, brakes, etc. as closely as possible. The component with the lowest capacity determines the capacity of the entire running gear. For example, if an axle beam rated at 5800 lbs., is matched with wheels rated at 2600 lbs. each (5200 lbs./axle); tires at 5100 lbs., and brakes at 5000 lbs., then the axle assembly capacity is rated for 5000 lbs. If you select larger capacity brakes, say 5200 lbs., the axle capacity is then rated by the next lowest capacity component (the tires) at 5100 lbs.

### COMPONENTS

All load carrying components and brakes in this catalog have rated capacities at given speeds. Some components are rated for low speed service only, on specified surfaces. Except where so noted, capacity of components is given at highway speeds, nominally 55 m.p.h. For low speed service ON PAVED SURFACES, WHEEL, HUB and AXLE capacities may be increased: CONSULT HADCO ENGINEERING DEPT.

TIRES may not exceed the ratings shown in the tire capacity charts. Individual tire manufacturers' ratings may vary slightly from the values shown and should be used when known. Tire inflation pressure must not exceed the inflation pressure shown for the wheel on which it is to be mounted.

BRAKE ratings are not to be exceeded, regardless of speed, without approval of Hadco's Engineering Department.

SPRING capacities remain constant regardless of speed.

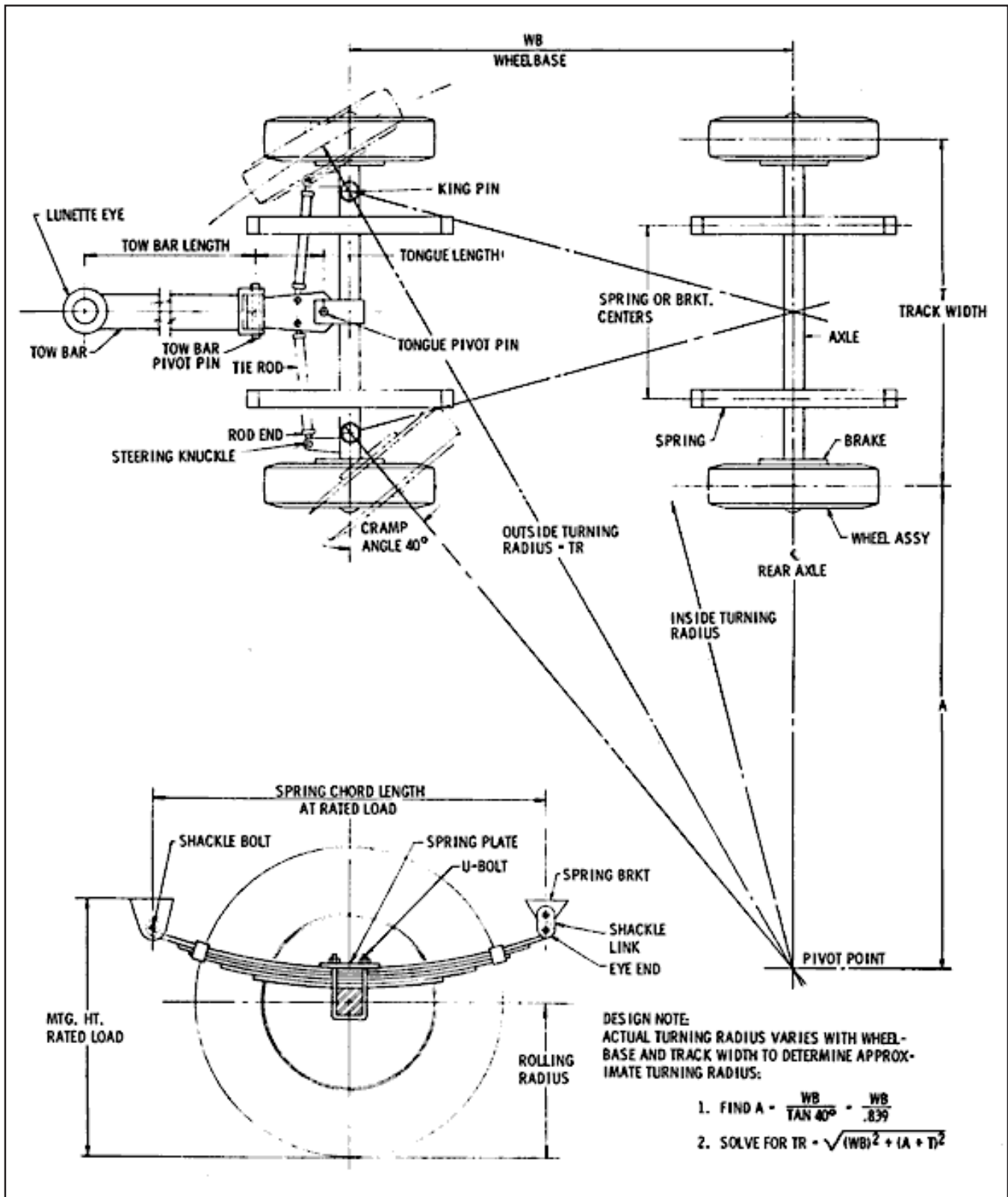
## WHEEL BOLT (LUG NUT) TORQUE.

Lug nuts should be re-torqued after the first 100 miles of operation and checked periodically thereafter.

Thread Size	Torque Ft.-Lbs
1/2"-20	70-90
5/8"-18	125-140
3/4"-16	450-500

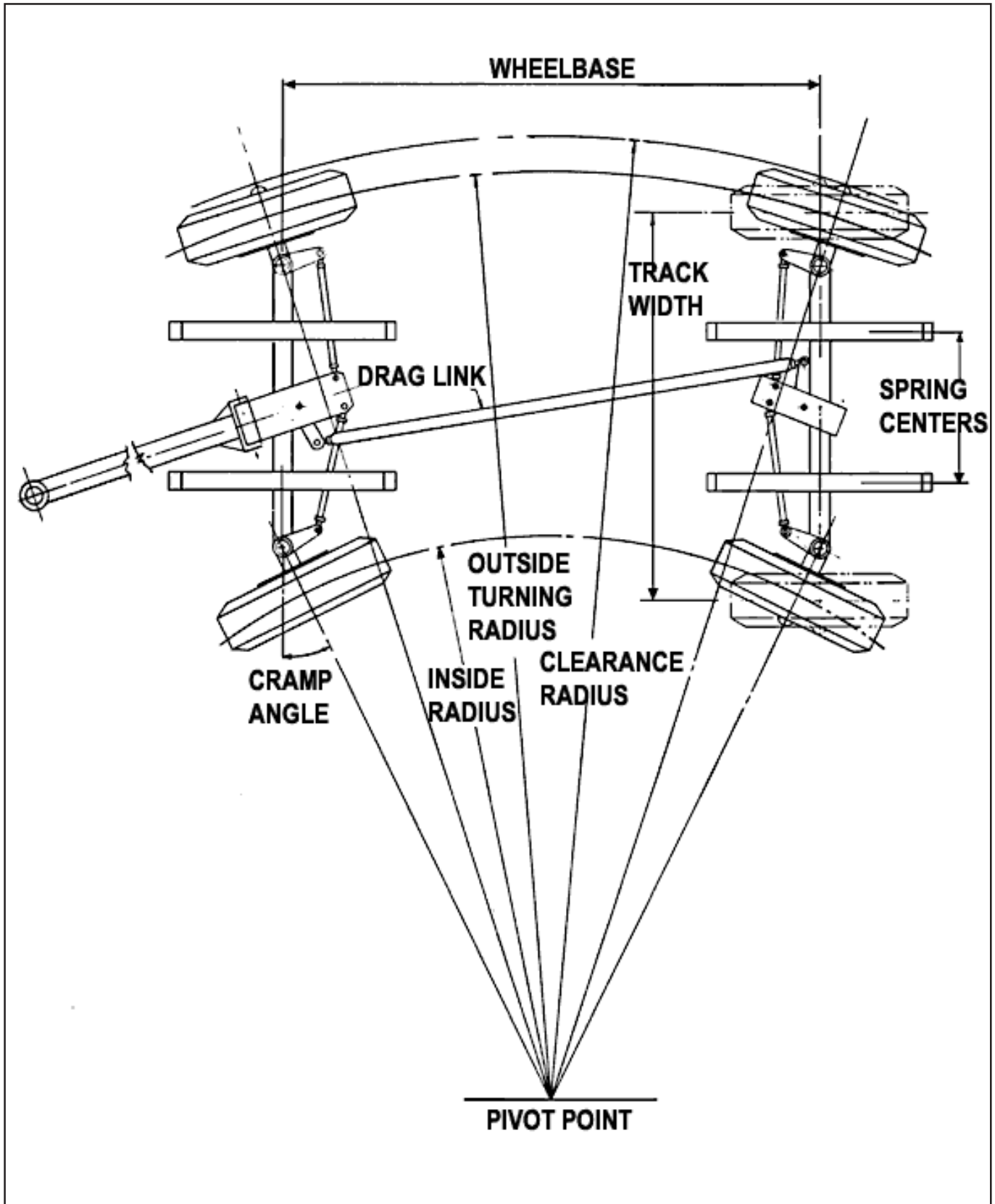
# STEERING GEOMETRY 2-WHEEL

The two-wheel steer design creates the most perfect tracking of vehicles in train, with minimum inside turning radius.



# STEERING GEOMETRY 4-WHEEL

The four-wheel steer design creates the most perfect tracking of vehicles in train, with minimum inside turning radius.



# AXLE BEAMS & CAPACITIES

## Beam Selection Procedure

### Determine Overhang








$$\text{Overhang} = \frac{\text{Track} - \text{Spring Center Distance}}{2}$$

1. Standard axles are manufactured from 1040 hot rolled steel. 4140 hot rolled normalized alloy steel is available on special order

2. Axle capacity can't be greater than the spindle capacity. Always use the lower capacity.

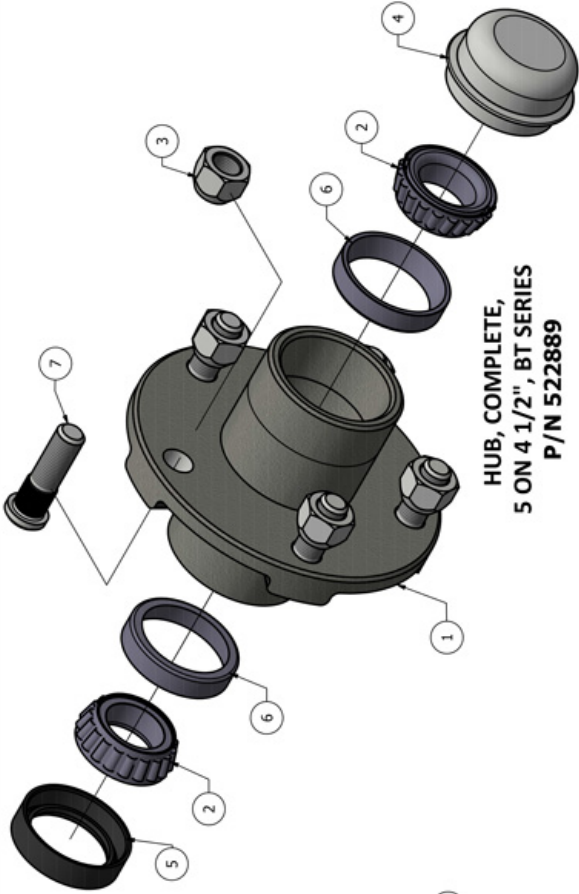
3. Capacities are to be reduced when springs are not used.

### \*+ Axle Beam Capacity Chart

AXLE	1 1/2" SQ.	1 3/4" SQ.	2" SQ.	2 1/4" SQ.	2 1/2" SQ.	3" SQ.	3 1/2" SQ.	
CROSS SECTION								
SECTION MODULOUS	0.562	0.893	1.33	1.9	2.6	4.5	7.16	
WEIGHT PER FOOT	7.65	10.4	13.6	17.2	21.2	30.6	41.6	
<b>O V E R H A N G</b>	7	2590	4230	6510	9780	13300	22900	36360
	7 1/2	2410	3950	6070	9030	12400	21400	33950
	8	2260	3700	5690	8470	11600	20050	31800
	8 1/2	2130	3490	5360	7970	10900	18850	29950
	9	2010	3290	5060	7530		17800	28280
	9 1/2	1910	3120	4800	7140	9780	16850	26800
	10	1810	2960	4550	6780	9280	16000	25450
	10 1/2	1720	2820	4330	6450	8850	15250	25450
	11	1645	2700	4140	6150	8440	14600	23150
	11 1/2	1575	2580	3960	5880	8080	14000	22100
	12	1510	2470	3780	5640	7740	13400	21200
	12 1/2	1450	2360	3640	5240	7430	12850	20360
	13	1390	2270	3500	5210	7140	12350	19600
	13 1/2	1340	2190	3370	5010	6880	11900	18850
	14	1290	2110	3250	4840	6630	11480	18200
	14 1/2	1245	2040	3140	4670	6400	11090	17560
	15	1250	1970	3040	4520	6190	10720	17000
	15 1/2	1165	1920	2940	4370	5980	10370	16420
	16	1130	1850	2850	4230	5800	10040	15900
	16 1/2	1095	1790	2760	4100	5630	9730	15430
	17	1065	1740	2680	3980	5470	9440	14980
	17 1/2	1035	1690	2600	3870	5310	9170	14550
	18	1005	1640	2530	3760	5160	8920	14140
	18 1/2		1600	2460	3660	5020	8680	13760
19	995	1560	2400	3560	4880	8450	13400	
19 1/2	930	1520	2340	3470	4760	8230	13052	
20	905	1480	2280	3390	4640	8020	12730	
20 1/2	885	1440	2220	3310	4530	7820	12120	
21	865	1400	2170	3230	4420	7630	12120	
21 1/2		1370	2120	3150	4320	7450	11840	
22		1340	2070	3080	4220	7280	11570	
22 1/2		1310	2020	3010	4130	7120	11310	

# BT SERIES HUBS

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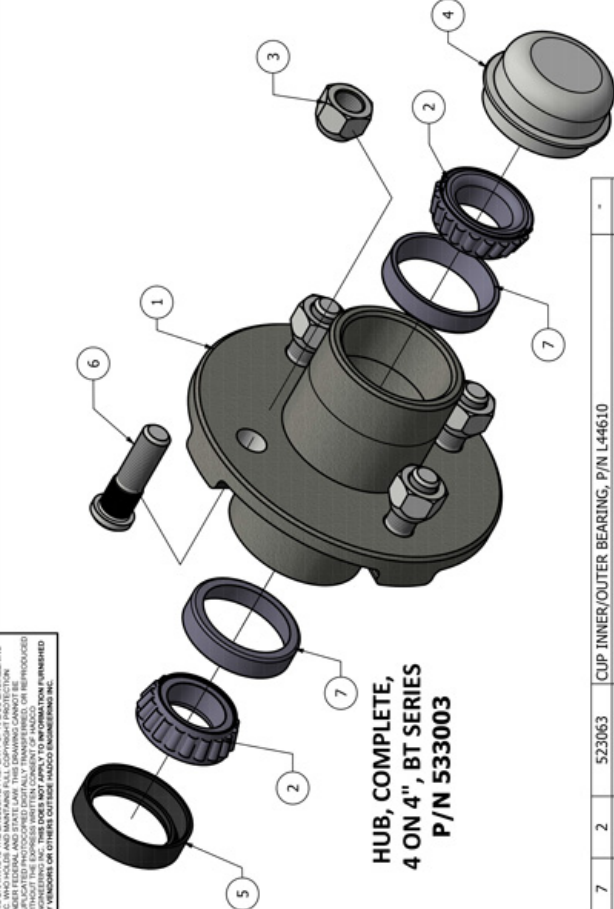


**HUB, COMPLETE,  
5 ON 4 1/2", BT SERIES  
P/N 522889**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
7	5	523313	WHEEL BOLT, 1/2"-20 THR. x 1 13/16" LG. OLD P/N 388	A
6	2	523063	CUP INNER/OUTER BEARING, P/N L44610	-
5	1	523601	GREASE SEAL - BT	-
4	1	533206	BT DUST CAP	A
3	5	523434	CONE NUT, 1/2"-20, OLD PART NO. 3055	A
2	2	523017	TAPERED ROLLER BEARING, CONE, PART NO. L44649	A
1	1	522888	HUB MACH. W/ CUPS PRESS IN, 5 ON 4 1/2", BT SERIES	B

BILL OF MATERIAL

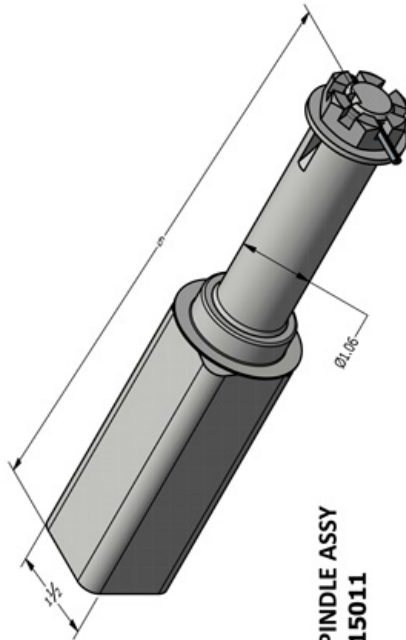
**BT SERIES  
2,000 LBS  
CAPACITY  
PER AXLE**



**HUB, COMPLETE,  
4 ON 4", BT SERIES  
P/N 533003**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
7	2	523063	CUP INNER/OUTER BEARING, P/N L44610	-
6	4	523313	WHEEL BOLT, 1/2"-20 THR. x 1 13/16" LG. OLD P/N 388	A
5	1	523601	GREASE SEAL - BT	-
4	1	533206	BT DUST CAP	A
3	4	523434	CONE NUT, 1/2"-20, OLD PART NO. 3055	A
2	2	523017	TAPERED ROLLER BEARING, CONE, PART NO. L44649	A
1	1	533001	HUB MACH. W/ CUPS PRESS IN, 4 ON 4", BT SERIES	B

BILL OF MATERIAL



**BT SERIES, SPINDLE ASSY  
P/N 515011**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
6	1	516003	1/8" Dia. x 1 1/2" LONG COTTER PIN OLD PART NO. 5745-24	A
5	1	516074	3/4"-16, SLOTTED HEX NUT FOR SPINDLE	A
4	1	516050	KEY WASHER, 1 1/2" O.D. & 3/4" I.D. OLD P/N 502	A
3	1	516034	Z-RING, 1 1/8" I.D. BT SERIES	A
2	1	523605	O-RING, 1.051" I.D. x .070 WIDTH, BT	-
1	1	515585	BT SERIES SPINDLE, 1 1/2" SQ.	B

BILL OF MATERIAL

UNLESS OTHERWISE SPECIFIED QUOTE NO:

TOLERANCES ON DIMENSIONS ARE IN INCHES

DECIMALS: .015

FRACTIONS: 1/32

ANGLES: ± 1/2°

MATERIAL:

FINISH:

APPROVED:

DATE

SCALE: 1/1.5

**HADCO ENGINEERING, INC.**  
1456 POMONA RD  
CORONA, CA 92882  
PH: 951-278-1952  
F: 951-278-1954

TITLE: **BT SERIES - HUBS COMPLETE- SPINDLE ASSY**

SIZE: C

PROTECT: REV:

PART #

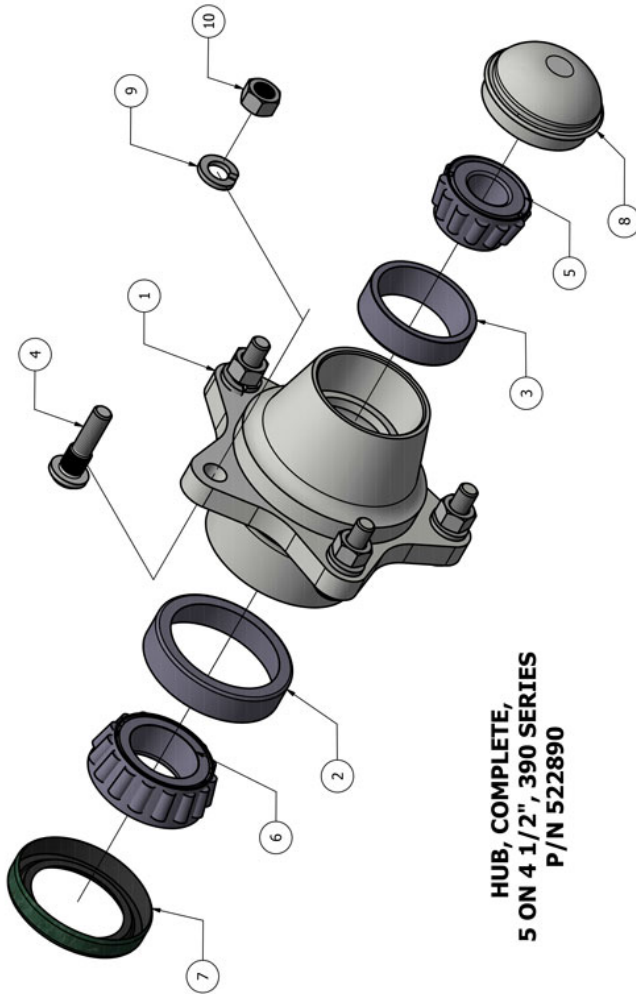
SCALE: 1/1.5

SHEET: 1 OF 1

DO NOT SCALE DRAWING

# 390 SERIES HUBS

## 390 SERIES 2,060 - 2,460 LBS CAPACITY PER AXLE



**HUB, COMPLETE,  
5 ON 4 1/2", 390 SERIES  
P/N 522890**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
10	5	519671	HEX NUT, 3/8"-24 THR. OLD P/N 5725-6	A
9	5	519660	3/8" LOCK WASHER	A
8	1	522445	DUST CAP (390)	B
7	1	523243	GREASE SEAL - 390 SERIES	-
6	1	523009	TAPERED ROLLER BEARING, CONE, PART NO. 15123	A
5	1	523005	TAPERED ROLLER BEARING, CONE, PART NO. 09067	A
4	5	523385	WHEEL BOLT, 3/8"-24 THR. x 1 3/8" LG. FOR 390 HUB	A
3	1	523001	OUTER BEARING CUP, PART NO. 09195	-
2	1	523003	OUTER BEARING CUP, PART NO. 15245	-
1	1	522430	HUB, 390 SERIES, MACHINE, 5 ON 4 1/2"	C

**BILL OF MATERIAL**

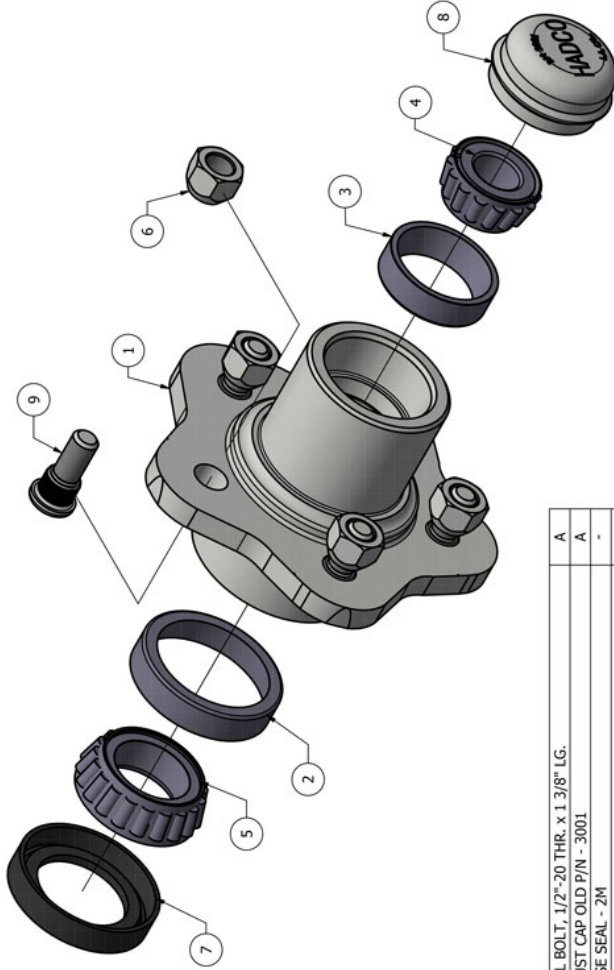
**NOTES:**

1. CONFORMS TO MS24327 AND MIL-W-8005A

UNLESS OTHERWISE SPECIFIED QUOTE NO:		1456 POMONA RD CORONA, CA 92882 PH: 951-278-1952 F: 951-278-1954	
DIMENSIONS ARE IN INCHES TOLERANCES ON		<b>HADCO</b> ENGINEERING, INC. <i>From the Hub to the Quality of Assembly Control</i>	
DECIMALS: ± 0.03	WEIGHT:	TITLE:	390 SERIES - HUB COMPLETE
FRACTIONS: ± 1/32	ANGLE: ± 1/2°	DATE:	
MATERIAL:	CHECKED:	PROJECT:	C
FINISH:	APPROVED:	SCALE:	1 : 1.5
DO NOT SCALE DRAWING	JOB#	PART #	390 SERIES
		SHEET:	1 OF 1

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# 2M SERIES HUBS



2M HUBS COMPLETE	
PART NUMBER	BOLT QTY.   BOLT CIRCLE
522061	5   4 1/2"
522067	5   4 3/4"

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	5	523300	WHEEL BOLT, 1/2"-20 THR. x 1 3/8" LG.	A
8	1	523045	2M DUST CAP OLD P/N - 3001	A
7	1	523043	GREASE SEAL - 2M	-
6	5	523434	CONE NUT, 1/2"-20, OLD PART NO. 3055	A
5	1	523041	TAPERED ROLLER BEARING, CONE, PART NO. LM48548	A
4	1	523039	TAPERED ROLLER BEARING, CONE, PART NO. M12649	A
3	1	523031	CUP OUTER BEARING, P/N M12610	-
2	1	523035	CUP INNER BEARING, P/N LM48510	-
1	1	522499	HUB, 3140, CASTING, OLD P/N 3140	C

BILL OF MATERIAL

## 2M SERIES

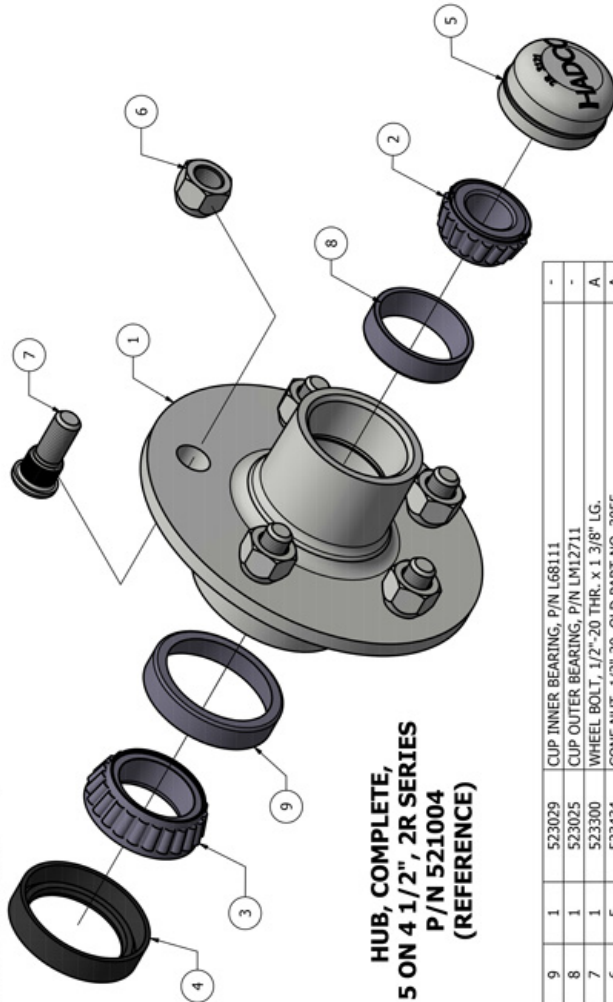
**1 1/2" SOLID SQ. AXLE 2,200 LBS.**  
**1 3/4" SOLID SQ. AXLE 3,000 LBS.**  
**CAPACITY PER AXLE**

**THIS IS A REPLACEMENT HUB FOR THE HADCO ORIGINAL 394 CASTING (2M) HUB. THIS REPLACEMENT DOES NOT ACCEPT A BRAKE DRUM. IT IS FOR USE FOR "NON-BRAKING" AXLES ONLY.**

UNLESS OTHERWISE SPECIFIED, QUOTE NO. DIMENSIONS ARE IN INCHES		HADCO ENGINEERING, INC. 1455 POMONA RD CORONA, CA 92882 PH: 951-278-1952 F: 951-278-1954	
DECIMALS: 1/100	WEIGHT: _____	DATE: 3/17/2017	TITLE: 2M SERIES - HUBS COMPLETE
FRACTIONS: 1/32	ANGLE: ± 1/2°	CHECKED: C. Pichette	PROJECT: _____
MATERIAL: _____	FINISH: _____	APPROVED: _____	SCALE: 1 : 1.5
DO NOT SCALE DRAWING		JOB#	PART# 2M SERIES
		SHEET: 1	OF 1

# 2R SERIES HUBS

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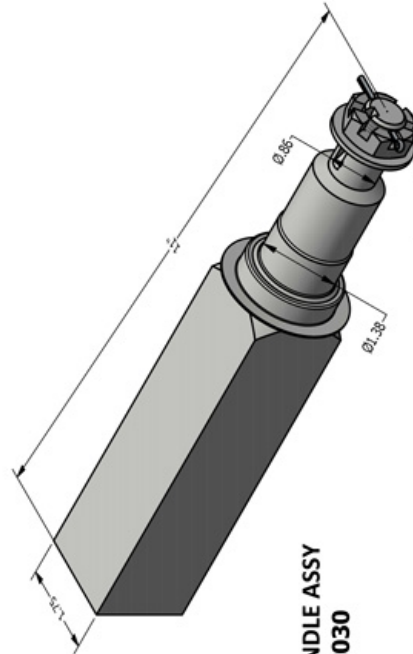
**HUB, COMPLETE,  
5 ON 4 1/2", 2R SERIES  
P/N 521004  
(REFERENCE)**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	1	523029	CUP INNER BEARING, P/N L68111	-
8	1	523025	CUP OUTER BEARING, P/N LM12711	-
7	1	523300	WHEEL BOLT, 1/2"-20 THR. x 1 3/8" LG.	A
6	5	523434	CONE NUT, 1/2"-20, OLD PART NO. 3055	A
5	1	523046	2R DUST CAP OLD P/N - 3121	A
4	1	523604	GREASE SEAL - 2R	-
3	1	523038	TAPERED ROLLER BEARING, CONE, PART NO. L68149	A
2	1	523036	TAPERED ROLLER BEARING, CONE, PART NO. LM12749	A
1	1	521001	HUB, 2R SERIES, REPLACEMENT, WITH PRESS-IN CUPS, 5 ON 4 1/2"	C

**BILL OF MATERIAL**

2R HUBS COMPLETE		
PART NUMBER	BOLT QTY.	BOLT CIRCLE
521032	4	4"
521004	5	4 1/2"
521010	5	4 3/4"
521034	5	5"
521021	5	5 1/2"
521026	6	5 1/2"

**2R SERIES  
3,500 LBS  
CAPACITY  
PER AXLE**



**2R SERIES, SPINDLE ASSY  
P/N 515030**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
6	1	516003	1/8" Dia. x 1 1/2" LONG COTTER PIN OLD PART NO. 5745-24	A
5	1	516074	3/4"-16, SLOTTED HEX NUT FOR SPINDLE	A
4	1	516050	KEY WASHER, 1 1/2" O.D. & 3/4" I.D. OLD P/N 502	A
3	1	516032	Z-RING, 1 7/16" I.D., 2R	A
2	1	523607	O-RING, 1 1/2" O.D., 2R	-
1	1	515587	SPINDLE 2R, 1 3/4" SQ.	B

**BILL OF MATERIAL**

UNLESS OTHERWISE SPECIFIED QUOTE NO:  
DIMENSIONS ARE IN INCHES  
TOLERANCES ON  
DECIMALS: .015  
FRACTIONS: .005  
MATERIAL:  
FINISH:  
WEIGHT:  
DRAWN BY:  
CHECKED:  
APPROVED:  
JOB#

**HADCO ENGINEERING, INC.**  
1456 POMONA RD  
CORONA, CA 92882  
PH: 951-278-1952  
F: 951-278-1954

TITLE: **2R SERIES - HUBS COMPLETE - SPINDLE ASSY**

SCALE: 1/1.5

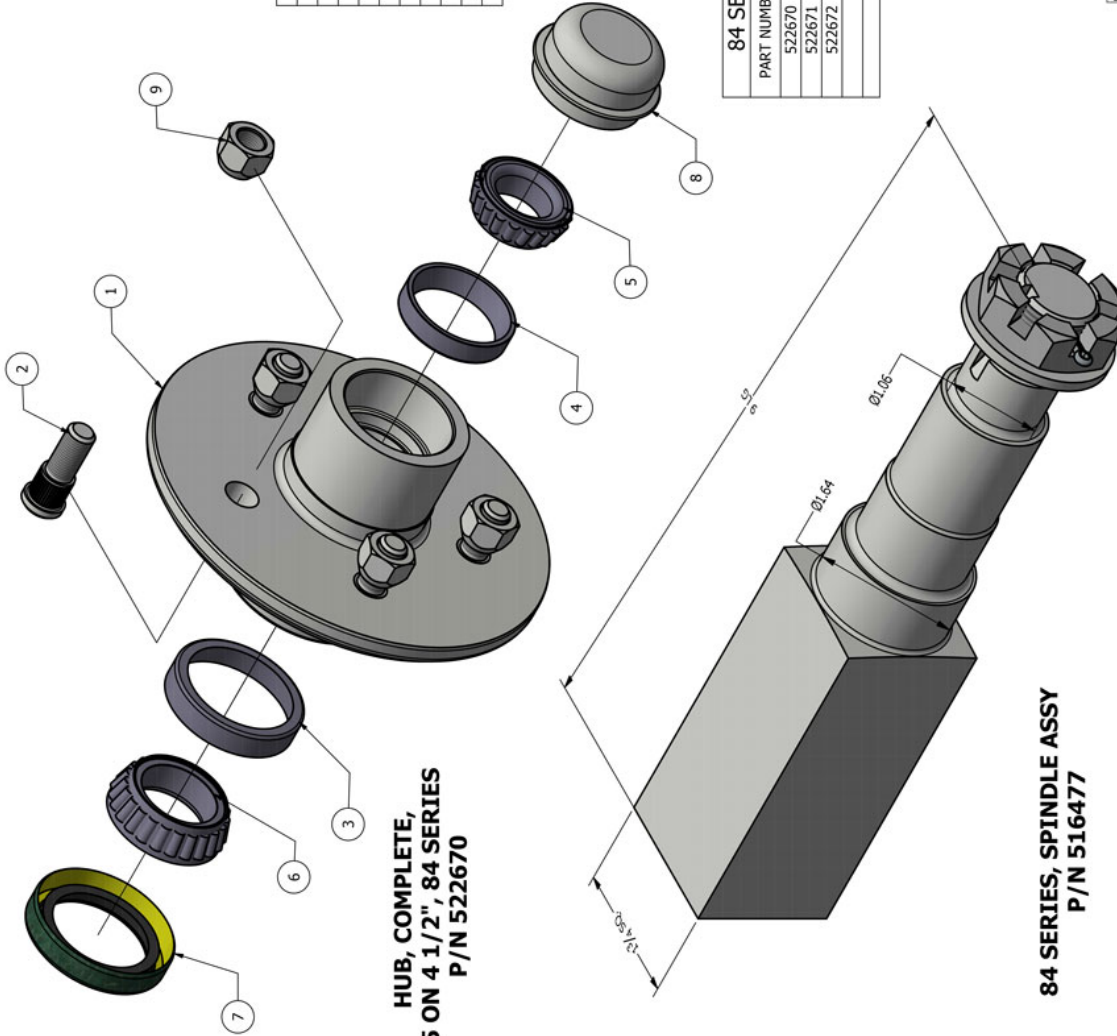
PART # 2R SERIES

SHEET: 1 OF 1

# 84 SERIES HUB

**84 SERIES  
3,500 LBS  
CAPACITY  
PER AXLE**

84 SERIES HUBS COMPLETE		
PART NUMBER	BOLT QTY.	BOLT CIRCLE
522670	5	4 1/2"
522671	5	5"
522672	6	5 1/2"



**HUB, COMPLETE,  
5 ON 4 1/2", 84 SERIES  
P/N 522670**

**84 SERIES, SPINDLE ASSY  
P/N 516477**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
4	1	515744	SPINDLE, 84 SERIES, 3500 LB, 1 3/4" SQ, X 9" LG	B
2	1	516003	1/8" Dia. X 1 1/2" LONG COTTER PIN OLD PART NO. 5745-24	A
3	1	516082	1"-14, SLOTTED HEX NUT FOR SPINDLE	A
1	1	516054	KEY WASHER, 1 13/16" O.D & 1.015" I.D. OLD P/N 548	A

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	5	523434	CONE NUT, 1/2"-20, OLD PART NO. 3055	A
8	1	533206	BT DUST CAP	A
7	1	523049	GREASE SEAL - 84 SERIES	-
6	1	523038	TAPERED ROLLER BEARING, CONE, PART NO. L68149	A
5	1	523017	TAPERED ROLLER BEARING, CONE, PART NO. L44649	A
4	1	523063	CUP INNER/OUTER BEARING, P/N L44610	-
3	1	523029	CUP INNER BEARING, P/N L68111	-
2	5	523307	WHEEL BOLT, 1/2"-20 THR. X 1 9/16" LG.	A
1	1	522655	HUB REPLACEMENT, 84 SERIES, .	C

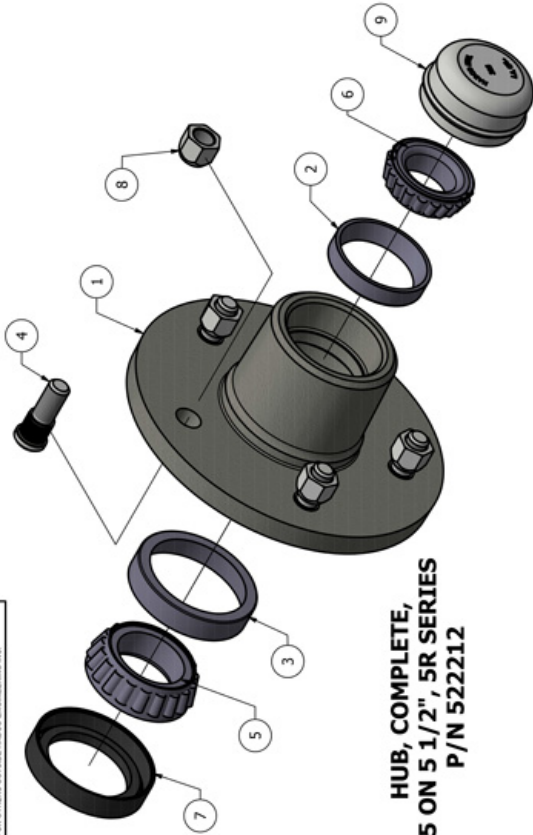
BILL OF MATERIAL

UNLESS OTHERWISE SPECIFIED QUOTE NO:		1455 POMONA RD CORONA, CA 92882 PH: 951-278-1952 F: 951-278-1954	
DIMENSIONS ARE IN INCHES TOLERANCES ON:		HADCOR ENGINEERING, INC. <i>From an HADCOR Quality Assurance Group</i>	
DECIMALS: ± .03	WEIGHT:	TITLE:	84 SERIES - HUBS COMPLETE - SPINDLE ASSY
FRACTIONS: ± 1/32	3 PLACE DEC: ± 0.00	DATE:	
ANGLE: ± 1/2°	DRAWN BY:	CHECKED:	
MATERIAL:	APPROVED:	SCALE:	1/1.5
FINISH:	JOB#	REV:	
DO NOT SCALE DRAWING		PART#	84 SERIES
		SHEET:	1 OF 1

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# 5R SERIES HUBS

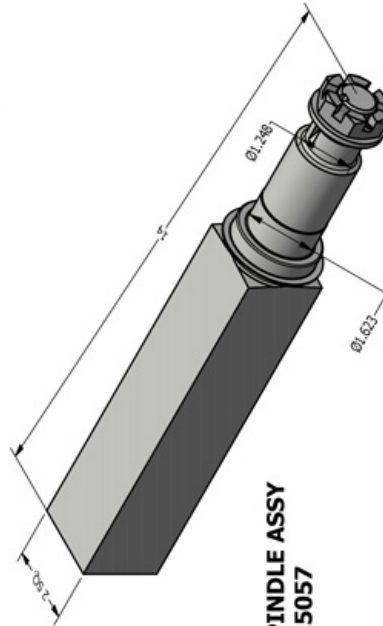
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**HUB, COMPLETE,  
5 ON 5 1/2", 5R SERIES  
P/N 522212**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	1	523135	DUST CAP 5R	B
8	5	523436	CONE NUT, 1/2"-20, 3/4" ACROSS FLAT, OLD P/N 3024	A
7	1	523603	GREASE SEAL - 5R	-
6	1	523121	TAPERED ROLLER BEARING, CONE, PART NO. LM67048	A
5	1	523122	TAPERED ROLLER BEARING, CONE, PART NO. LM501349	A
4	5	523307	WHEEL BOLT, 1/2"-20 THR. x 1.916" LG. OLD PART NO. 3071	A
3	1	523114	CUP INNER BEARING (5R) P/N LM501310	-
2	1	523111	CUP OUTER BEARING (5R) P/N LM67010	-
1	1	522690	HUB, 5R, CASTING	C

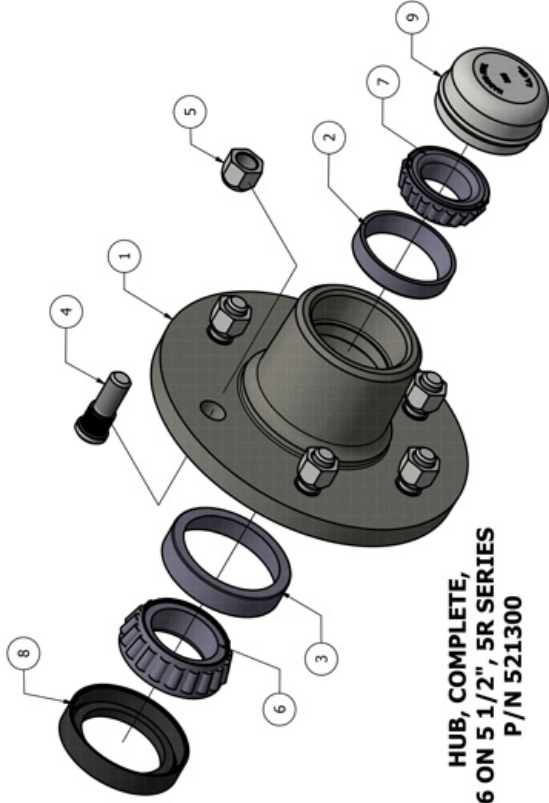
BILL OF MATERIAL



**5R SERIES, SPINDLE ASSY  
P/N 515057**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
6	1	516003	1/8" Dia. x 1 1/2" LONG COTTER PIN OLD PART NO. 5745-24	A
5	1	516082	1"-14, SLOTTED HEX NUT FOR SPINDLE	A
4	1	516054	KEY WASHER, 1.1316" O.D. & 1.015" I.D. OLD P/N 548	A
3	1	516033	O-RING, 1.1116" I.D. 5R SERIES	A
2	1	523606	O-RING, 1.68" I.D. x .070 WIDTH, 5R SERIES	-
1	1	515588	SPINDLE, 2" SQ x 14" LG, 5R SERIES	B

BILL OF MATERIAL



**HUB, COMPLETE,  
6 ON 5 1/2", 5R SERIES  
P/N 521300**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	1	523135	DUST CAP 5R	B
8	1	523603	GREASE SEAL - 5R	-
7	1	523121	TAPERED ROLLER BEARING, CONE, PART NO. LM67048	A
6	1	523122	TAPERED ROLLER BEARING, CONE, PART NO. LM501349	A
5	6	523436	CONE NUT, 1/2"-20, 3/4" ACROSS FLAT, OLD P/N 3024	A
4	6	523307	WHEEL BOLT, 1/2"-20 THR. x 1.916" LG. OLD PART NO. 3071	A
3	1	523114	CUP INNER BEARING (5R) P/N LM501310	-
2	1	523111	CUP OUTER BEARING (5R) P/N LM67010	-
1	1	522690	HUB, 5R, CASTING	C

BILL OF MATERIAL

**5R SERIES  
5,200 LBS  
CAPACITY  
PER AXLE**

UNLESS OTHERWISE SPECIFIED QUOTE NO:

DIMENSIONS ARE IN INCHES

TOLERANCES ON

DECIMALS: .015

FRACTIONS: 1/32

ANGLES: ± 1/2°

MATERIAL: C

FINISH: APPROVED:

DATE

WEIGHT:

DRAWN BY:

CHECKED:

APPROVED:

JOB#

1456 POMONA RD  
CORONA, CA 92882  
PH: 951-278-1952  
F: 951-278-1954

**HADCO**  
ENGINEERING, INC.  
*There are no Frictions for Quality Rotating Cores™*

TITLE: **5R SERIES - HUBS COMPLETE - SPINDLE ASSY**

SIZE: PROJECT: REV:

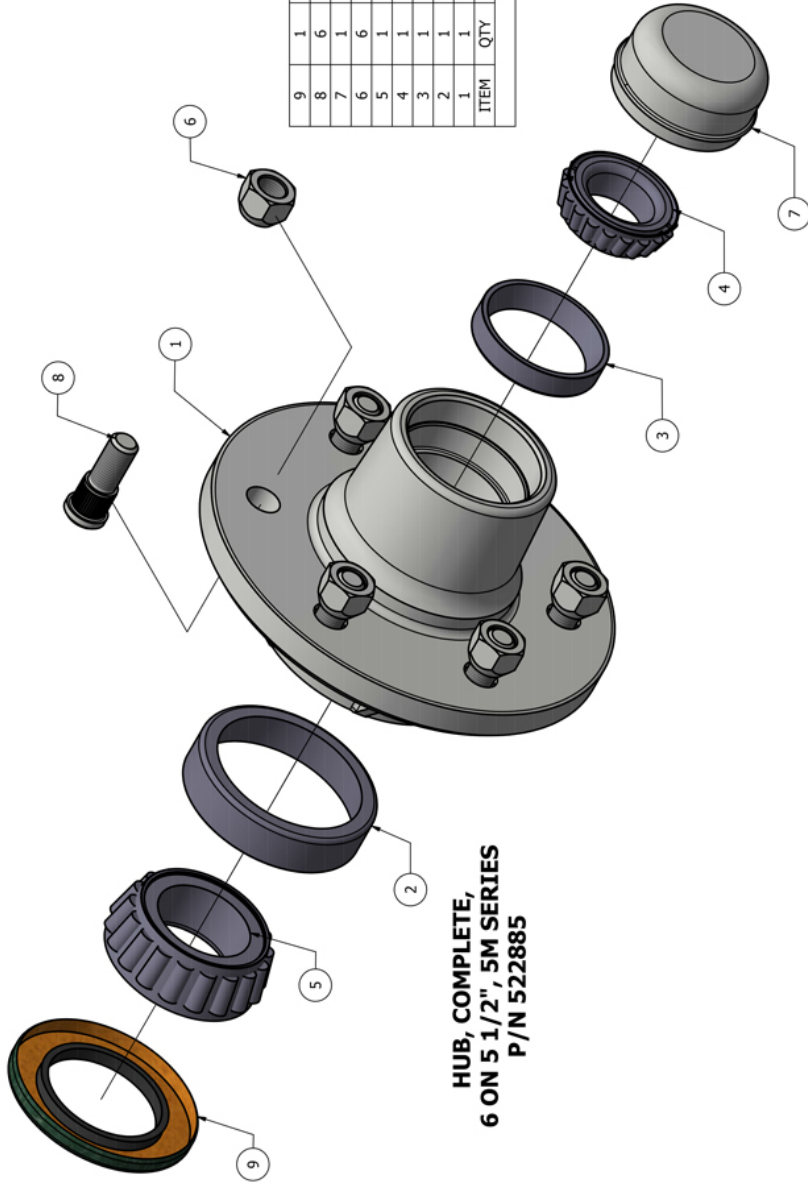
SCALE: 1/2

PART # 5R SERIES

SHEET: 1 OF 1

# 5M SERIES HUBS

**5M SERIES  
5,200 LBS  
CAPACITY  
PER AXLE**



**HUB, COMPLETE,  
6 ON 5 1/2", 5M SERIES  
P/N 522885**

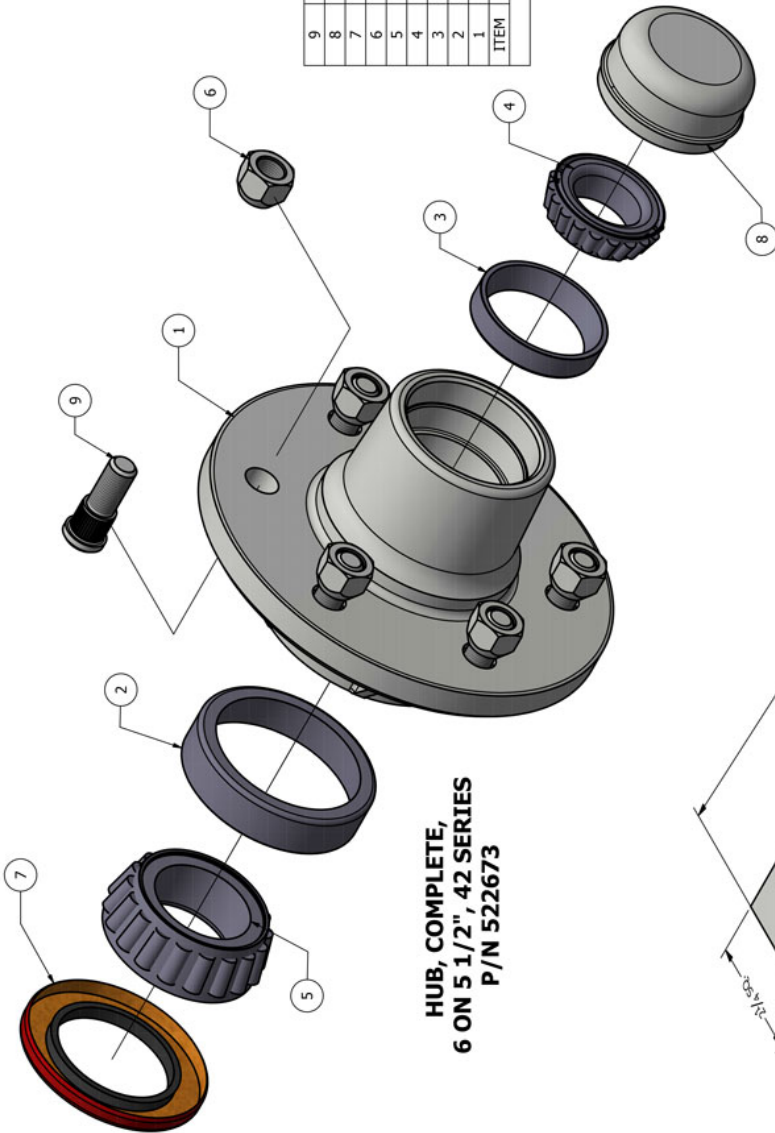
ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	1	AD7172N	GREASE SEAL - 42 TO 5M	-
8	6	523307	WHEEL BOLT, 1/2"-20 THR. x 1 9/16" LG.	A
7	1	523255	DUST CAP, MIL-W-8005	B
6	6	523434	CONE NUT, 1/2"-20, OLD PART NO. 3055	B
5	1	523125	TAPERED ROLLER BEARING, CONE, PART NO. 25577	A
4	1	523121	TAPERED ROLLER BEARING, CONE, PART NO. LM67048	A
3	1	523111	CUP OUTER BEARING (5R) P/N LM67010	-
2	1	523117	BEARING CUP (120) P/N 25520	-
1	1	522653	HUB CASTING, 5,200 LB, "U.H.G.", 42 SERIES	C
			BILL OF MATERIAL	

UNLESS OTHERWISE SPECIFIED QUOTE NO:		1456 POMONA RD CORONA, CA 92882 PH: 951-278-1952 F: 951-278-1954	
DIMENSIONS ARE IN INCHES		TOLERANCES ON:	
DECIMALS:	± .03	WEIGHT:	IBS.
FRACTIONS:	± .010	DATE:	
ANGLES:	± 1/2°	DRAWN BY:	
MATERIAL:		CHECKED:	
FINISH:		APPROVED:	
TITLE:		5M SERIES - HUB COMPLETE	
PROJECT:		C	
SCALE:		1 : 1.5	
JOB#:		5M SERIES	
DO NOT SCALE DRAWING		SHEET: 1 OF 1	

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# 42 SERIES HUB

## 42 SERIES 5,200 LBS CAPACITY PER AXLE



**HUB, COMPLETE,  
6 ON 5 1/2", 42 SERIES  
P/N 522673**

**42 SERIES, SPINDLE ASSY  
P/N 516481**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	6	523307	WHEEL BOLT, 1/2"-20 THR. x 1 9/16" LG.	A
8	1	523255	DUST CAP, MIL-W-8005	B
7	1	523047	GREASE SEAL - 42 SERIES	-
6	6	523434	CONE NUT, 1/2"-20, OLD PART NO. 3055	A
5	1	523131	TAPERED ROLLER BEARING, CONE, PART NO. 25580	A
4	1	523121	TAPERED ROLLER BEARING, CONE, PART NO. LM67048	A
3	1	523117	CUP OUTER BEARING (5R) P/N LM67010	-
2	1	523117	BEARING CUP (120) P/N 25520	-
1	1	522653	HUB CASTING, 5,200 LB, "U.H.G.", 42 SERIES	C

BILL OF MATERIAL

UNLESS OTHERWISE SPECIFIED QUOTE NO:		DATE	
DIMENSIONS ARE IN INCHES		DRAWN BY:	
TOLERANCES ON		CHECKED:	
DECIMALS: ± .03	FRACTIONS: ± 1/32	APPROVED:	
3 PLACE DEC: ± 0.0	ANGLE: ± 1/2°	JOB#	
MATERIAL:		SCALE: 1 / 1.5	
FINISH:		PART# 42 SERIES	
DO NOT SCALE DRAWING		SHEET: 1 OF 1	

**HADCO**  
ENGINEERING, INC.  
*From the Hub to the Quality Bearing Coaxial*

1456 POMONA RD  
CORONA, CA 92882  
PH: 951-278-1952  
F: 951-278-1954

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
4	1	516003	1/8" Dia. x 1 1/2" LONG COTTER PIN OLD PART NO. 5745-24	A
3	1	516082	1"-1 1/4" SLOTTED HEX NUT FOR SPINDLE	A
2	1	516054	KEY WASHER, 1 13/16" O.D. & 1.015" I.D. OLD P/N 548	A
1	1	515743	SPINDLE, 2 1/4" SQ x 14" LG. 42 SERIES	B

BILL OF MATERIAL

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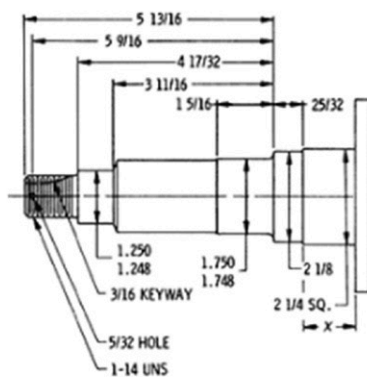
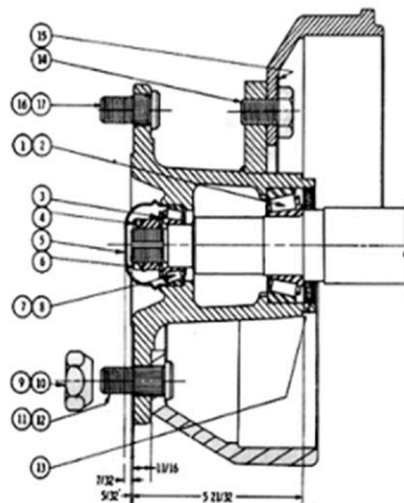
# 7M SERIES HUBS (Obsolete)

5 BOLTS ON 8" BOLT CIRCLE  
 6 BOLTS ON 8-3/4" BOLT CIRCLE  
 8 BOLTS ON 6-1/2" BOLT CIRCLE

- CAPACITY PER AXLE: 7,000 LBS HIGHWAY SERVICE
- REFER TO TECHNICAL INFORMATION FOR LOW SPEED SERVICE.
- BRAKES AVAILABLE: 12 x 2 PARKING 12 x 3 HYDRAULIC PARKING AND SERVICE DISC TYPE HYDRAULIC SERVICE.
- WEIGHT PER HUB: 25 LBS.

ITEM	CODE #	DESCRIPTION
1	523161	Inner Cup (3525)
2	523163	Inner Cone (3578)
3	516054	Key Washer *
4	516003	Cotter Pin *
5	523145	Grease Cap
6	516080	Spindle Nut *
7	523003	Outer Cup (15245)
8	523009	Outer Cone (15123)
9	523438	Single Wheel Nut LH
10	523439	Single Wheel Nut RH
11	523393	Wheel bolt (Hub&Drum)
12	523392	Wheel bolt (Hub&Drum)
13	523165	Grease Seal
14	549319	Hex Head Cap Screw 7/8-14x1-1/2
15	549249	Lock Washer 7/8
16	523332	Wheel Bolt Hub Only LH
17	523333	Wheel Bolt Hub Only RH

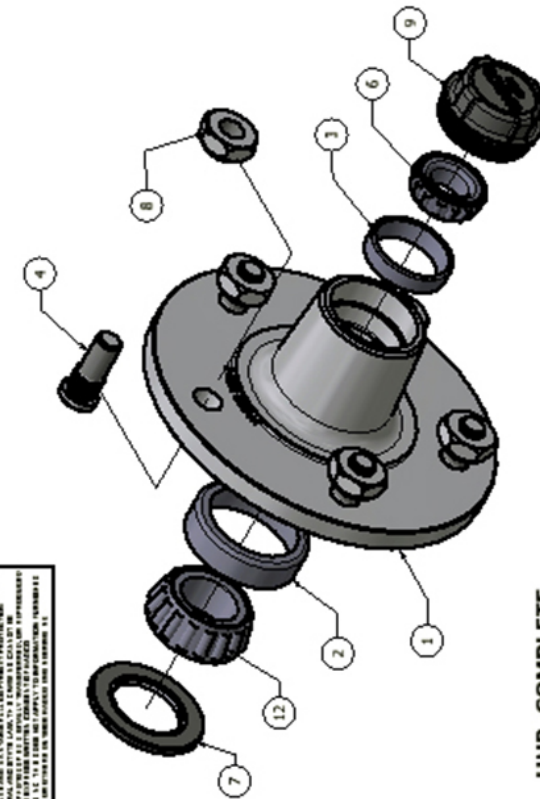
\* Furnished as part of axle or spindle.



(7M) 347 "Hat-Type" Hub Casting OBSOLETE. No Replacement. See Next Page For The Available (7M) Series.  
 This Page Is For Reference Only

# 7M SERIES HUB (Available)

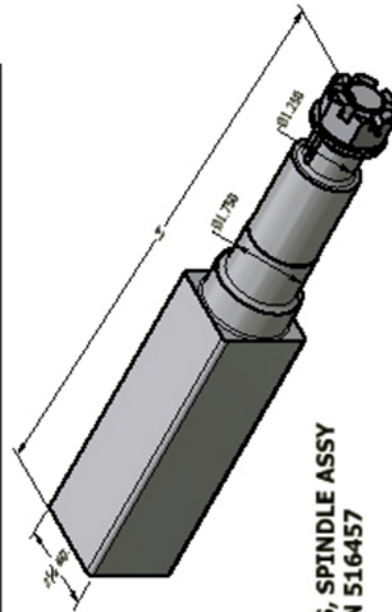
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**HUB, COMPLETE,  
5 ON 8", LH, 7M SERIES  
P/N 522249**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	1	523136	DUST CAP (70/85)	A
8	5	523438	CONE NUT, 3/4"-16, LH	A
7	1	523165	GREASE SEAL - 7M SERIES	-
6	1	523009	TAPERED ROLLER BEARING, CONE, PART NO. 15123	A
5	1	523163	TAPERED ROLLER BEARING, CONE, PART NO. 3578	A
4	5	523332	WHEEL BOLT, 3/4"-16 THR. x 2 1/32" LG. LEFT HAND - SHORT	A
3	1	523003	OUTER BEARING CUP, PART NO. 15245	-
2	1	523161	CLIP INNER BEARING, P/N 3525	-
1	1	522669	HUB, 70/85, CASTING	D

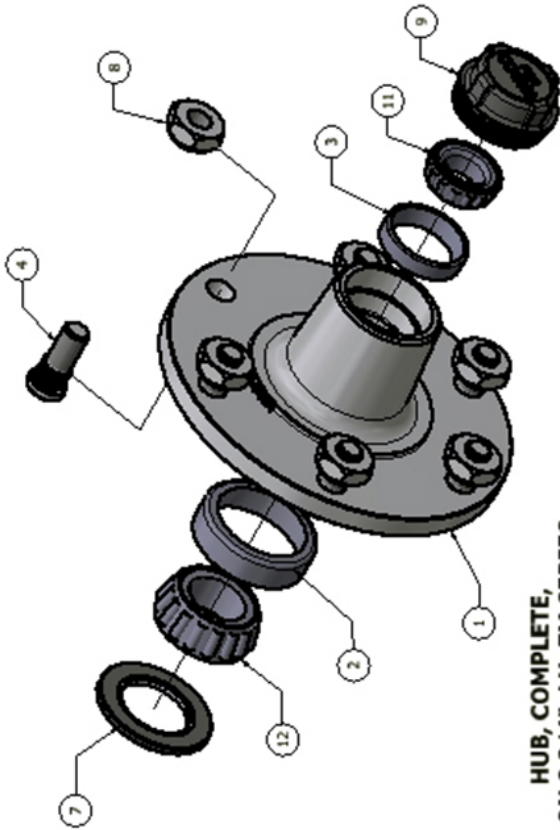
BILL OF MATERIAL



**7M SERIES, SPINDLE ASSY  
P/N 516457**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
4	1	516003	1/8" Dia. x 1 1/2" LONG COTTER PIN OLD PART NO. 5745-24	A
3	1	516080	1"-14, SLOTTED HEX NUT, SEMIFINISHED	A
2	1	516054	KEY WASHER, 1 13/16" O.D. & 1.015" I.D. OLD P/N 548	A
1	1	515990	SPINDLE, 2 1/4" SQ. FOR 7M HUB	C

BILL OF MATERIAL



**HUB, COMPLETE,  
6 ON 8 3/4", LH, 7M SERIES  
P/N 522255**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	1	523136	DUST CAP (70/85)	A
8	6	523438	CONE NUT, 3/4"-16, LH	A
7	1	523165	GREASE SEAL - 7M SERIES	-
6	1	523009	TAPERED ROLLER BEARING, CONE, PART NO. 15123	A
5	1	523163	TAPERED ROLLER BEARING, CONE, PART NO. 3578	A
4	6	523332	WHEEL BOLT, 3/4"-16 THR. x 2 1/32" LG. LEFT HAND - SHORT	A
3	1	523003	OUTER BEARING CUP, PART NO. 15245	-
2	1	523161	CLIP INNER BEARING, P/N 3525	-
1	1	522669	HUB, 70/85, CASTING	D

BILL OF MATERIAL

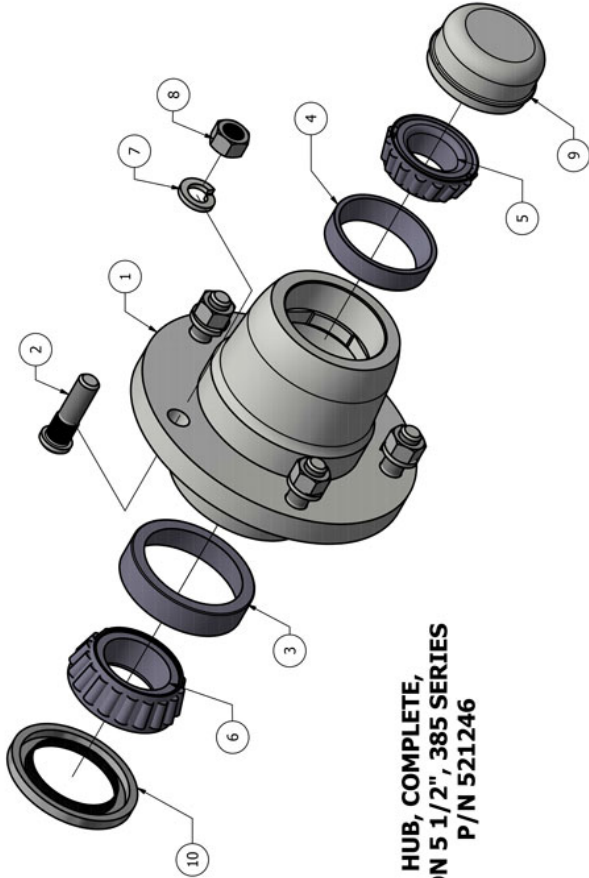
**7M SERIES  
7,000 LBS  
CAPACITY  
PER AXLE**

PART NUMBER	7M SERIES HUBS COMPLETE	BOLT QTY.	BOLT CIRCLE
522248	RH	5	8
522249	LH	5	8
522255	LH	6	8 3/4
522256	RH	6	8 3/4

		1415 INDIANA RD. CENDELA, LA 70608 PH: 504.208.1917 FAX: 504.208.1918	
TITLE: <b>7M SERIES - HUBS COMPLETE - SPINDLE ASSY</b>		DATE:	
DRAWN BY:		CHECKED:	
MATERIAL:		PART NO.:	
PART NO.:		REV:	
NO. OF PARTS:		SHEET:	
1 / 2.5		1 OF 2	

# 385 SERIES HUBS

## 385 SERIES 9,000 LBS CAPACITY PER AXLE



**HUB, COMPLETE,  
5 ON 5 1/2", 385 SERIES  
P/N 521246**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
10	1	523253	385/3047 GREASE SEAL	-
9	1	523255	DUST CAP, MIL-W-8005	B
8	5	549263	HEX NUT, 1/2"-20 THR. OLD P/N 5725-8	A
7	5	549245	1/2" LOCK WASHER	A
6	1	523139	TAPERED ROLLER BEARING, CONE, PART NO. 24780	A
5	1	523009	TAPERED ROLLER BEARING, CONE, PART NO. 15123	A
4	1	523003	OUTER BEARING CUP, PART NO. 15245	-
3	1	523137	INNER BEARING CUP, PART NO. 24720	-
2	5	523313	WHEEL BOLT, 1/2"-20 THR. x 1 13/16" LG. OLD P/N 388	A
1	1	522909	385 HUB, MACHINED	C

BILL OF MATERIAL

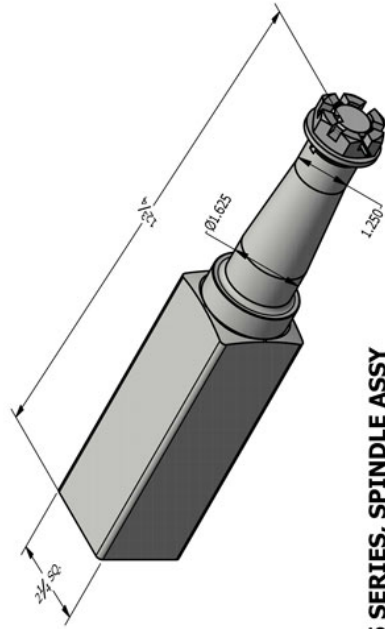
UNLESS OTHERWISE SPECIFIED QUOTE NO: DIMENSIONS ARE IN INCHES TOLERANCES ON		DRAWN BY:		DATE:	
DECIMALS: ± 0.03	FRACTIONS: ± 1/32	ANGLE: ± 1/2°	CHECKED:	APPROVED:	JOB#
TITILE: <b>385 SERIES - HUB COMPLETE - SPINDLE ASSY</b>		PROJECT: C		SCALE: 1/2	
MATERIAL:		FINISH:		PART # 385 SERIES	
DO NOT SCALE DRAWING		SHEET: 1		OF 1	

**HADCO**  
ENGINEERING, INC.  
*"From the Hub to the Wheel, Rotating Correctly"*

1455 POMONA RD  
CORONA, CA 92882  
PH: 951-278-1952  
F: 951-278-1954

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
4	1	516003	1/8" Dia. x 1 1/2" LONG COTTER PIN OLD PART NO. 5745-24	A
3	1	516082	1"-14, SLOTTED HEX NUT FOR SPINDLE	A
2	1	516054	KEY WASHER, 1 13/16" O.D. & 1.015" I.D. OLD P/N 548	A
1	1	515895	MIL-W-8005A SPINDLE STANDARD BLANK 2 1/4" SQ. OLD P/N 760	C

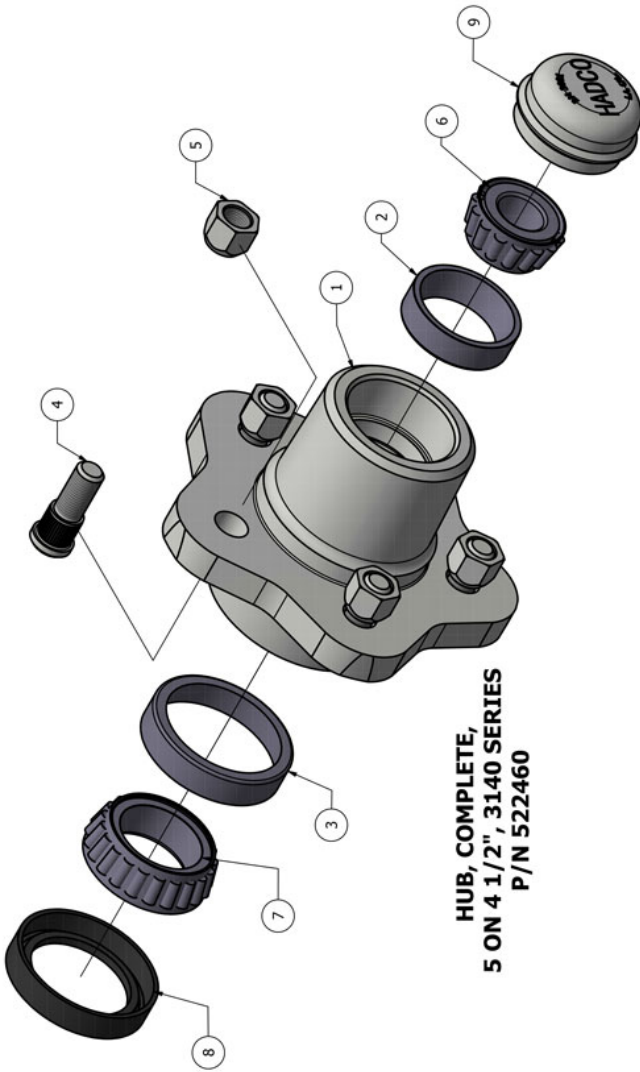
**385 SERIES, SPINDLE ASSY  
P/N 515300**



BILL OF MATERIAL

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# 3140 SERIES HUBS

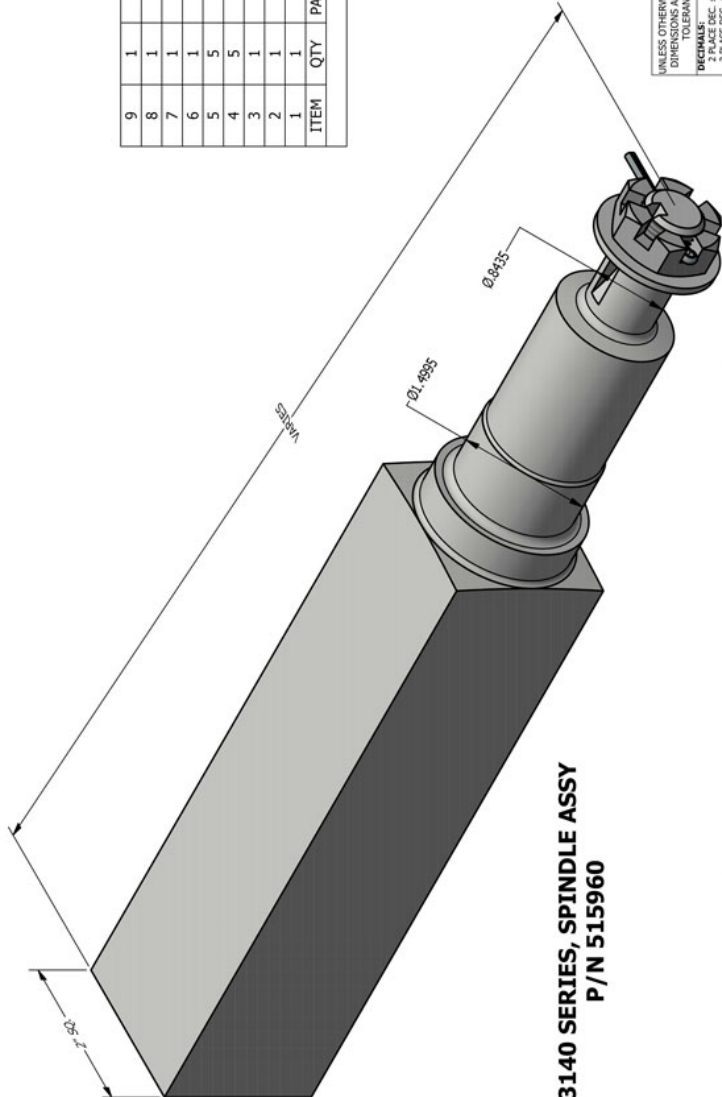


**HUB, COMPLETE,  
5 ON 4 1/2", 3140 SERIES  
P/N 522460**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	1	523045	2M DUST CAP OLD P/N - 3001	A
8	1	523085	GREASE SEAL - 2M	-
7	1	523079	TAPERED ROLLER BEARING, CONE, PART NO. LM29749	A
6	1	523039	TAPERED ROLLER BEARING, CONE, PART NO. M12649	A
5	5	523436	CONE NUT, 1/2"-20, 3/4" ACROSS FLAT, OLD P/N 3024	A
4	5	523307	WHEEL BOLT, 1/2"-20 THR. x 1 9/16" LG. OLD PART NO. 3071	A
3	1	523065	CUP INNER BEARING, P/N LM29710	-
2	1	523031	CUP OUTER BEARING, P/N M12610	-
1	1	522499	HUB, 3140, CASTING, OLD P/N 3140	C

BILL OF MATERIAL

**3140 SERIES  
8,000 LBS  
CAPACITY  
PER AXLE**



**3140 SERIES, SPINDLE ASSY  
P/N 515960**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
4	1	516003	1/8" Dia. x 1 1/2" LONG COTTER PIN OLD PART NO. 5745-24	A
3	1	516074	3/4"-16, SLOTTED HEX NUT FOR SPINDLE	A
2	1	516050	KEY WASHER, 1 1/2" O.D. & 3/4" I.D. OLD P/N 502	A
1	1	513160	SPINDLE, 2" SQ x VARIES", 3140 HUB	B

BILL OF MATERIAL

UNLESS OTHERWISE SPECIFIED QUOTE NO:  
DIMENSIONS ARE IN INCHES  
TOLERANCES ON

DECIMALS: .015  
FRACTIONS: 1/32  
3 PLACE DEC. ± 0.0

ANGLE: ± 1/2°  
MATERIAL:  
FINISH:

WEIGHT:  
DRAWN BY:  
CHECKED:  
APPROVED:  
JOB#

DATE  
PROJECT:  
SCALE: 1 / 1.5

REV:  
SHEET: 1 OF 1

1455 POMONA RD  
CORONA, CA 92882  
PH: 951-278-1952  
F: 951-278-1954

**HADCO  
ENGINEERING, INC.**  
*From the Hub to the Quality of Assembly*

TITLE: **3140 SERIES - HUB COMPLETE - SPINDLE  
ASSY**

SCALE: 1 / 1.5

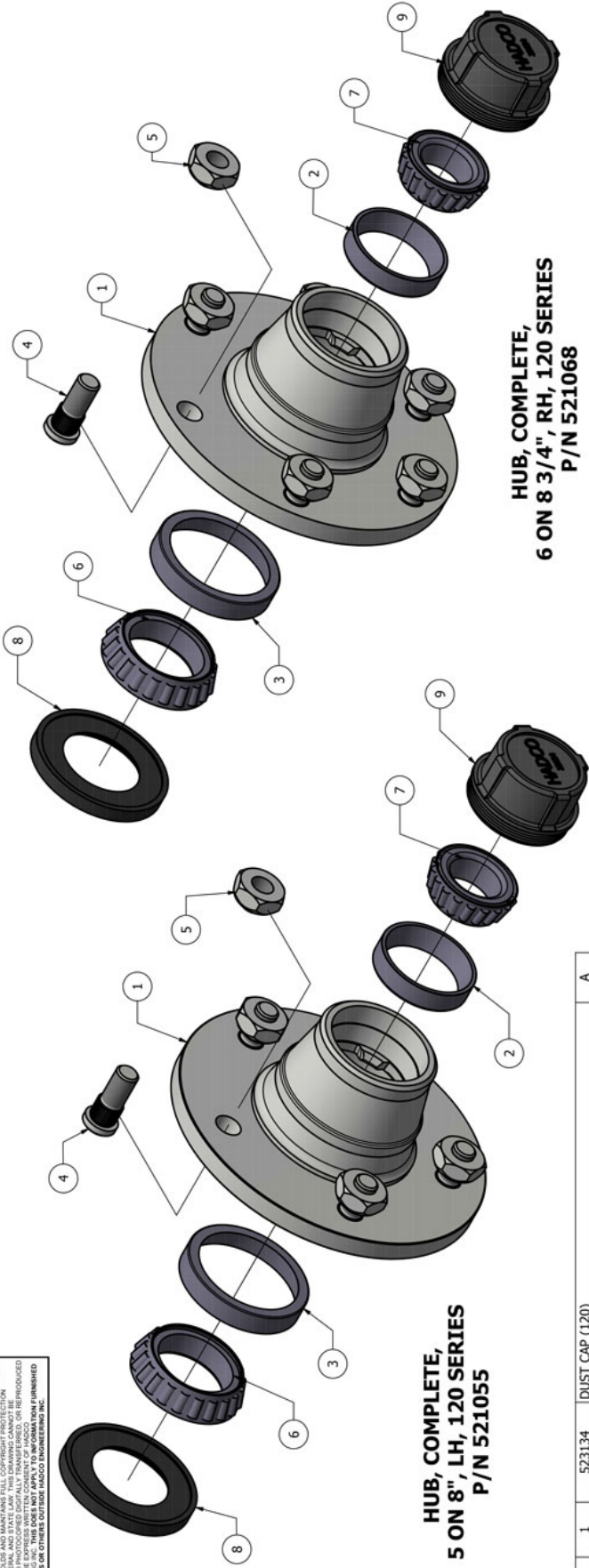
SHEET: 1 OF 1

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# 120 SERIES HUBS

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**HUB, COMPLETE,  
5 ON 8", LH, 120 SERIES  
P/N 521055**

**HUB, COMPLETE,  
6 ON 8 3/4", RH, 120 SERIES  
P/N 521068**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	1	523134	DUST CAP (120)	A
8	1	523014	GREASE SEAL - 120 SERIES	-
7	1	523118	TAPERED ROLLER BEARING, CONE, PART NO. 25590	A
6	1	523096	TAPERED ROLLER BEARING, CONE, PART NO. JLM710949C	A
5	5	523438	CONE NUT, 3/4"-16, LH	A
4	5	523332	WHEEL BOLT, 3/4"-16 THR. x 2 1/32" LG. LEFT HAND - SHORT	A
3	1	523094	INNER BEARING CUP, P/N JLM710910	-
2	1	523117	BEARING CUP (120) P/N 25520	D
1	1	522587	WHEEL HUB, CASTING, 120 SERIES	D

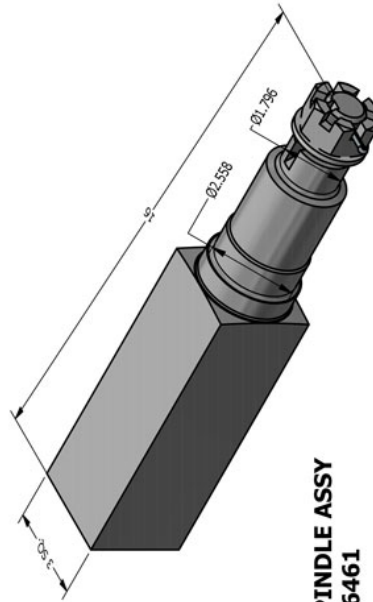
BILL OF MATERIAL

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
9	1	523134	DUST CAP (120)	A
8	1	523014	GREASE SEAL - 120 SERIES	-
7	1	523118	TAPERED ROLLER BEARING, CONE, PART NO. 25590	A
6	1	523096	TAPERED ROLLER BEARING, CONE, PART NO. JLM710949C	A
5	6	523439	CONE NUT, 3/4"-16, RH	A
4	6	523333	WHEEL BOLT, 3/4"-16 THR. x 2 1/32" LG. RIGHT HAND - SHORT	A
3	1	523094	INNER BEARING CUP, P/N JLM710910	-
2	1	523117	BEARING CUP (120) P/N 25520	-
1	1	522587	WHEEL HUB, CASTING, 120 SERIES	D

BILL OF MATERIAL

120 SERIES HUBS COMPLETE			
PART NUMBER	TYPE (HDWR)	BOLT QTY.	BOLT CIRCLE
521055	LH	5	8
521056	RH	5	8
521068	RH	6	8 3/4
521069	LH	6	8 3/4

**120 SERIES  
12,000 LBS  
CAPACITY  
PER AXLE**



**120 SERIES, SPINDLE ASSY  
P/N 516461**

ITEM	QTY	PART NUMBER	DESCRIPTION	SIZE
4	1	516011	3/16" Dia. x 2 1/2" LONG COTTER PIN	A
3	1	549300	1 1/4"-12, SLOTTED HEX NUT, OLD PART NO. 5720-20	A
2	1	516060	KEY WASHER, 2 1/4" O.D & 1 9/32" I.D. OLD P/N 3068	A
1	1	515934	120 SPINDLE, 3" SQUARE	C

BILL OF MATERIAL

UNLESS OTHERWISE SPECIFIED, QUOTE NO. DIMENSIONS ARE IN INCHES TOLERANCES ON

DECIMALS: ± .01	WEIGHT:	IBS.
FRACTIONS: ± 1/32	ANGLE: ± 1/2°	DRAWN BY:
3 PLACE DEC: ± 0.03		CHECKED:
		APPROVED:
		DATE:
		JOB#:

**HADCO ENGINEERING, INC.**  
1456 POMONA RD  
CORONA, CA 92882  
PH: 951-278-1952  
FAX: 951-278-1954

TITLE: **120 SERIES - HUBS COMPLETE - SPINDLE ASSY**

PROJECT: **C**  
SCALE: **1 / 2.5**  
PART# **120 SERIES**  
SHEET: **1 OF 1**

# GREASE SEAL & DUST CAP DIMENSIONS

## GREASE SEALS DIMENSIONS

Series	Part No.	O.D.	I.D.	Overall Height (Thickness)
(BT)	523601(3151)	1.986	1.4375	.50 + 1/64 (.0156)
(2R)	523604(3150)	2.368	1.75	.50 + 1/64 (.0156)
(390)	523243	2.50	1.75	.31 (5/16")
(84)	523049(UHI)	2.56	1.71	.50
(2M)	523043(3077)	2.569	1.75	.484
(3M)3075/76&3140	523085	2.569	1.75	.484
(3M)	523087 (322)	3.00	1.87	.31 (5/16")
(5R)3109,3149	523603	2.897	2.031	.5625 + 1/64 (.0156)
(42)	523047	3.37	2.25	.37 (3/8)
(42to5M)	AD7172N	3.37	2.12	.37 (3/8)
(5M)	523127(3063)	3.266	2.00	.625
(7M)	523165(3064)	3.43	2.125	.25
(385)	523253(6081)	3.062	2.125	.50
(70/85)	523010(3231)	3.25	2.50	.25
(120)	523014(3232)	4.499	2.875	.468

## DUST CAP DIMENSIONS

Series	Part No.	O.D.(Less Lip)	O.D.(With Lip)	Height
(390)	523245	1.940	2.160	1.00
(BT)	533206(C448)	2"	2.3125	1.1875
(2M)	523045(3001)	1.978	2.1875	1.0625
(2R)	523046(3121)	1.813	1.8750	1.00"
(3M)	523089(313)	2.245	2.4375	1.25 + .0313
(5R)	523135(316)	2.334	2.50	1.25
(385)	523255(385/386)	2.440	2.5938	1.25
*** The Above Dust Caps Are Metal "Knock-IN" Type ***				
*** The Below Dust Caps Are Plastic "Screw In" Or "Threaded"***				
(70/85)	523136	2.841	3"	1.5"
(120)	523134	3.467	3.6"	2.10"

# STUB SPINDLES

## HADCO STUB SPINDLE ASSEMBLIES

Spindles Are Made From 1040/1045 Hot Rolled Steel, SQUARE BAR  
Listed Below Are Spindles WITHOUT a Brake Flange.

*\*Inquire Within If a Brake Flange is required.*

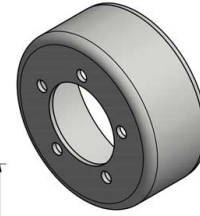
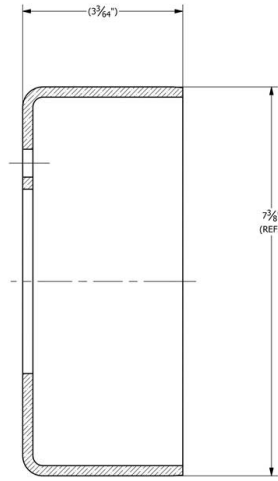
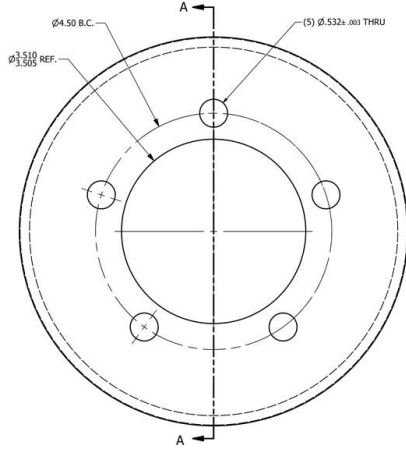
SPINDLES ARE COMPLETE WITH SPINDLE NUT, KEY WASHER & COTTER PIN

REFER TO "HUB & SPINDLE" PAGE TO VIEW STUB SPINDLES BY SERIES

<b>Series</b>	<b>Part #</b>	<b>Capacity</b>	<b>Description</b>
BT	515011	2000#	1.5" Sq. X 9" Over All Length
(2R)	515030	3500#	1.75 Square x 11" Over All Length
(84)	516477	3500#	1.75 Square x 9" Over All Length
(5R)	515057	5200#	2" Square x 14" Over All Length
(42)	516481	5200#	2.25" x 14" Over All Length
(385)(3047)	515300	7800# To 9000#	2.25" Square x 12.75 Over All Length
(7M)	516457	7000#	2.25" Square x 14" Over All Length
(70/85)	516459	8500#	2.50" Square x 14" Over All Length
(3140)	515960	8000#	2" Square x "X" (Variable Length)
(120)	516461	12,000#	3" Square x 16" Over All Length

# BRAKES DRUMS(#1)

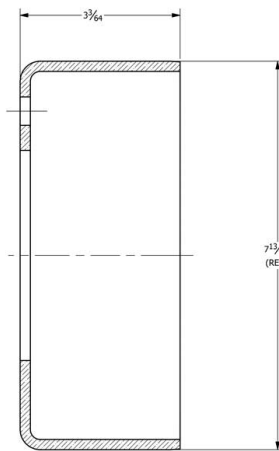
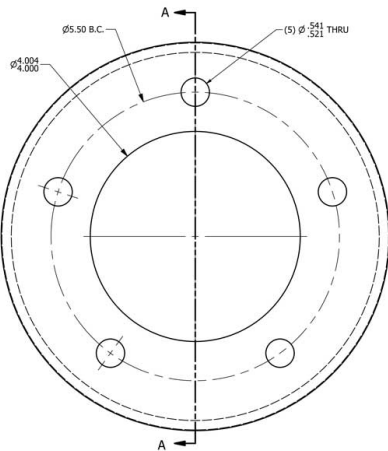
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SECTION A-A  
SCALE 1/1

UNLESS OTHERWISE SPECIFIED QUOTE NO. DIMENSIONS ARE IN INCHES TOLERANCES ON:		<b>HADCO</b> ENGINEERING, INC.		1456 POMONA RD. CORONA, CA 92682 PH: 951-278-1952 F: 951-278-1954	
FINISH:	ZINC PLATE	WEIGHT:	5.176 LBS.	DATE:	
FRAC:	± 1/32	ANG:	± 1/2°	DRAWN BY:	
MATERIAL:	Steel	CHECKED:		DATE:	
APPROVED:		SCALE:	1/1	PROJECT:	
DO NOT SCALE DRAWING		TITLE:	BRAKE DRUM, 7 x 1 3/4 BRAKE, 5 ON 4 1/2 B.C.		
		SIZE:	C	PART#:	524855
		SHEET:	1 OF 1		

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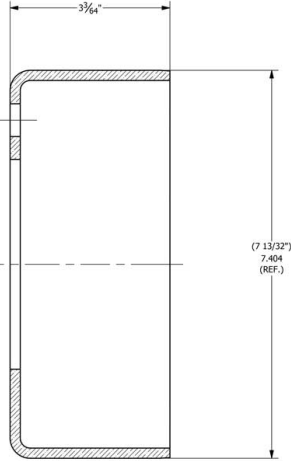
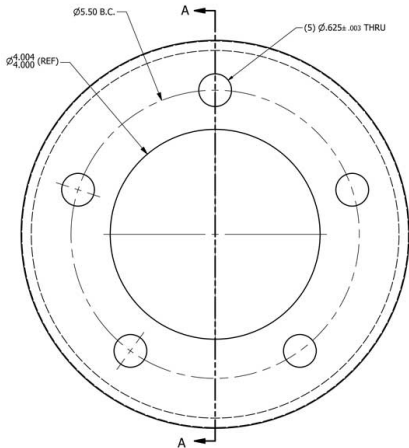


SECTION A-A  
SCALE 1/1

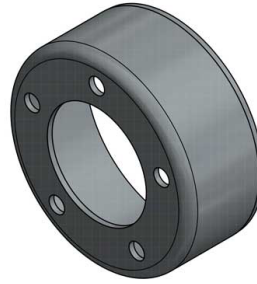
UNLESS OTHERWISE SPECIFIED QUOTE NO. DIMENSIONS ARE IN INCHES TOLERANCES ON:		<b>HADCO</b> ENGINEERING, INC.		1456 POMONA RD. CORONA, CA 92682 PH: 951-278-1952 F: 951-278-1954	
FINISH:	ZINC PLATED	WEIGHT:	4.470 LBS.	DATE:	
FRAC:	± 1/32	ANG:	± 1/2°	DRAWN BY:	
MATERIAL:	Steel	CHECKED:		DATE:	
APPROVED:		SCALE:	1/1	PROJECT:	
DO NOT SCALE DRAWING		TITLE:	BRAKE DRUM, 7 x 1 3/4 BRAKE, 5 ON 5 1/2 B.C., .541 STUD HOLES		
		SIZE:	C	PART#:	524890
		SHEET:	1 OF 1		

# BRAKES DRUMS(#2)

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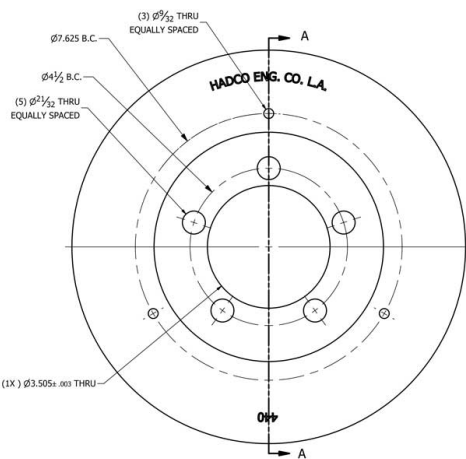
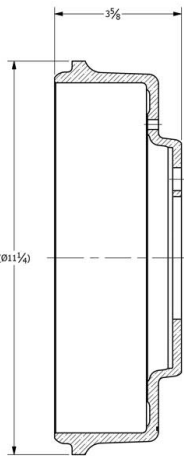


SECTION A-A  
SCALE 1/1



UNLESS OTHERWISE SPECIFIED QUOTE NO. DIMENSIONS ARE IN INCHES TOLERANCES ON:		<b>HADCO ENGINEERING INC.</b> 1456 POKONA RD. CORONA, CA 92682 PH: 951-278-1962 F: 951-278-1954	
WEIGHT: 4.451 Bbl.	TITLE: BRAKE DRUM, 7 x 1 3/4, 5 ON 5 1/2,	DATE:	REV:
FINISH: ZINC PLATED	SCALE: 1/1	PART# 524891	SHEET: 1 OF 1

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF HADCO ENGINEERING INC. AND IS TO BE USED ONLY FOR THE PROJECT SPECIFICALLY IDENTIFIED HEREON. ANY REPRODUCTION OR TRANSMISSION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF HADCO ENGINEERING INC. IS STRICTLY PROHIBITED. THIS NOTICE SHALL APPLY TO ANY REPRODUCTION OR TRANSMISSION OF THIS DRAWING IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.



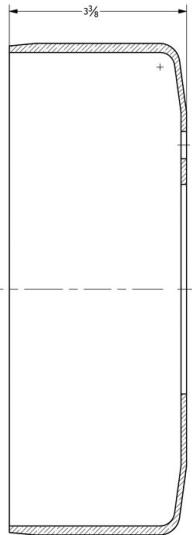
SECTION A-A  
SCALE 1 : 1.5



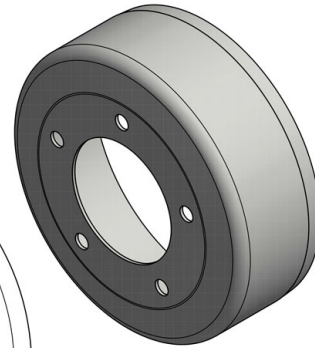
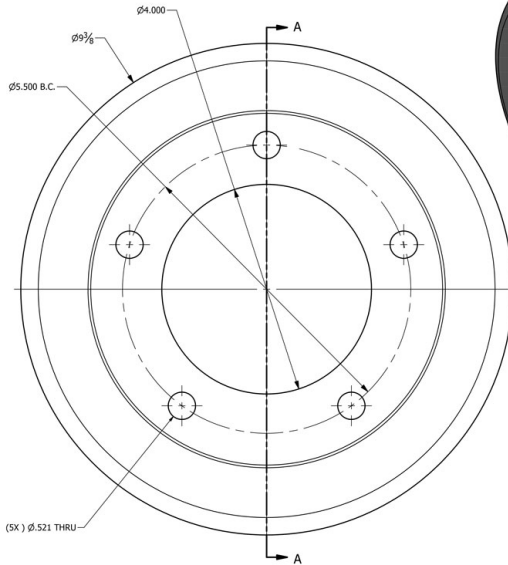
UNLESS OTHERWISE SPECIFIED QUOTE NO. DIMENSIONS ARE IN INCHES TOLERANCES ON:		<b>HADCO ENGINEERING INC.</b> 1456 POKONA RD. CORONA, CA 92682 PH: 951-278-1962 F: 951-278-1954	
WEIGHT: 13.539 Bbl.	TITLE: BRAKE DRUM, MACHINE, 10 x 2, 5 ON 4 1/2, 3 1/2" I.D., 21/32 HOLES	DATE:	REV:
FINISH: STEEL - CAST IRON	SCALE: 1 : 1.5	PART# 524007	SHEET: 1 OF 1

# BRAKES DRUMS(#3)

UNLESS OTHERWISE SPECIFIED QUOTE NO. DIMENSIONS ARE IN INCHES TOLERANCES ON:

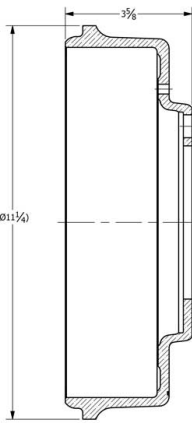


SECTION A-A  
SCALE 1 : 1

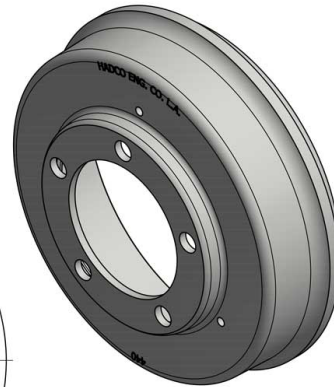
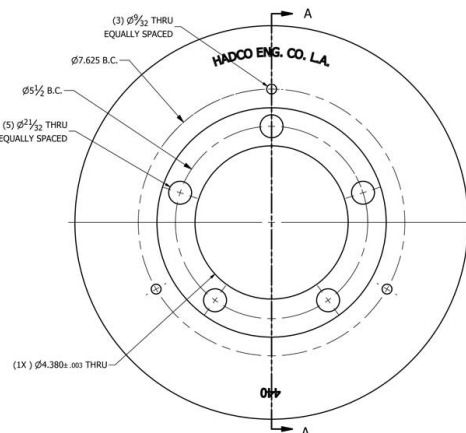


UNLESS OTHERWISE SPECIFIED QUOTE NO. DIMENSIONS ARE IN INCHES TOLERANCES ON:		<b>HADCO ENGINEERING, INC.</b>		1455 POKONA RD. CORONA, CA 92682 PH: 951-278-2922 F: 951-278-9594	
WEIGHT: 5.867 Bbl.	DATE:	TITLE: <b>BRAKE DRUM, 9 X 2, 5 ON 5 1/2" B.C.</b>		REV:	
FINISH: Steel	APPROVED:	SCALE: 1 : 1	PART# 524122	SHEET: 1 OF 1	
DO NOT SCALE DRAWING					

UNLESS OTHERWISE SPECIFIED QUOTE NO. DIMENSIONS ARE IN INCHES TOLERANCES ON:



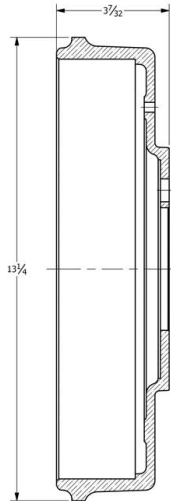
SECTION A-A  
SCALE 1 : 1.5



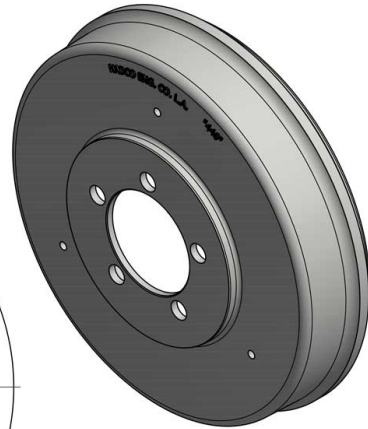
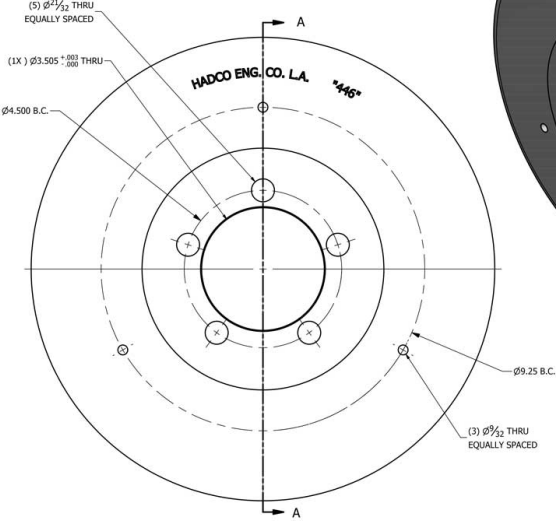
UNLESS OTHERWISE SPECIFIED QUOTE NO. DIMENSIONS ARE IN INCHES TOLERANCES ON:		<b>HADCO ENGINEERING, INC.</b>		1455 POKONA RD. CORONA, CA 92682 PH: 951-278-2922 F: 951-278-9594	
WEIGHT: 13.190 Bbl.	DATE:	TITLE: <b>BRAKE DRUM, MACHINE, 10 x 2, 5 ON 5 1/2, 4.38" I.D., 21/32 HOLES</b>		REV:	
FINISH: STEEL - CAST IRON	APPROVED:	SCALE: 1 : 1.5	PART# 524013	SHEET: 1 OF 1	
DO NOT SCALE DRAWING					

# BRAKES DRUMS(#4)

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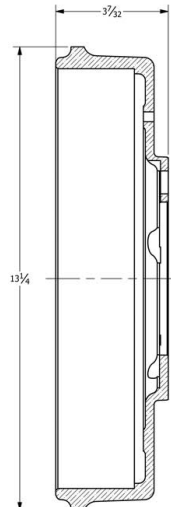


SECTION A-A  
SCALE 1 : 1.5

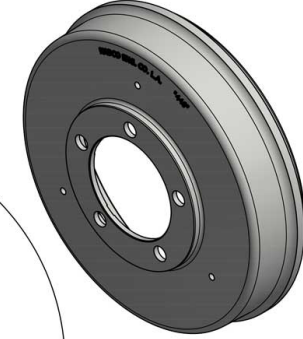
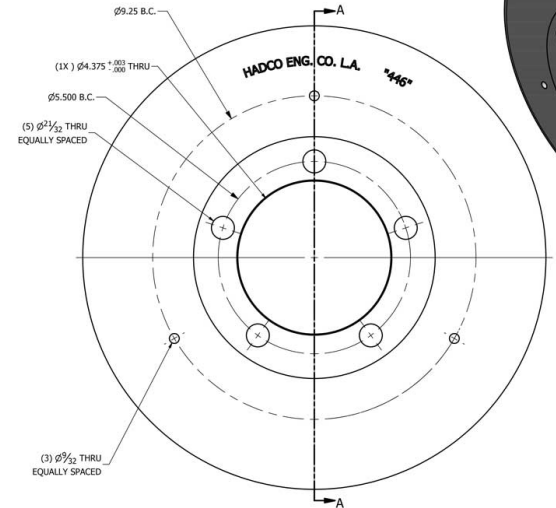


UNLESS OTHERWISE SPECIFIED QUOTE NO.		HADCO ENGINEERING, INC.		1456 POMONA RD. POMONA, CA 92882 PH 951-239-1942 F 951-239-1954	
DIMENSIONS ARE IN INCHES TOLERANCES ON:		TITLE		DATE	
FINISHES:	APPROVED:	DRAWN BY:		DATE	
DO NOT SCALE DRAWING	JOB#	SCALE:		PART#	
		1 : 1.5		524054	
		PROJECT:		REV:	
		C		1 OF 1	
		MATERIAL:		WEIGHT:	
		STEEL - CAST IRON		18.673 BIL.	
		FRACTIONS:		TOLERANCES ON:	
		1/32		± 0.001	
		3/32		± 0.002	
		1/2		± 0.005	
		1		± 0.010	
		2		± 0.015	
		3		± 0.020	
		4		± 0.030	
		5		± 0.040	
		6		± 0.050	
		7		± 0.060	
		8		± 0.070	
		9		± 0.080	
		10		± 0.090	
		11		± 0.100	
		12		± 0.110	
		13		± 0.120	
		14		± 0.130	
		15		± 0.140	
		16		± 0.150	
		17		± 0.160	
		18		± 0.170	
		19		± 0.180	
		20		± 0.190	
		21		± 0.200	
		22		± 0.210	
		23		± 0.220	
		24		± 0.230	
		25		± 0.240	
		26		± 0.250	
		27		± 0.260	
		28		± 0.270	
		29		± 0.280	
		30		± 0.290	
		31		± 0.300	
		32		± 0.310	
		33		± 0.320	
		34		± 0.330	
		35		± 0.340	
		36		± 0.350	
		37		± 0.360	
		38		± 0.370	
		39		± 0.380	
		40		± 0.390	
		41		± 0.400	
		42		± 0.410	
		43		± 0.420	
		44		± 0.430	
		45		± 0.440	
		46		± 0.450	
		47		± 0.460	
		48		± 0.470	
		49		± 0.480	
		50		± 0.490	
		51		± 0.500	
		52		± 0.510	
		53		± 0.520	
		54		± 0.530	
		55		± 0.540	
		56		± 0.550	
		57		± 0.560	
		58		± 0.570	
		59		± 0.580	
		60		± 0.590	
		61		± 0.600	
		62		± 0.610	
		63		± 0.620	
		64		± 0.630	
		65		± 0.640	
		66		± 0.650	
		67		± 0.660	
		68		± 0.670	
		69		± 0.680	
		70		± 0.690	
		71		± 0.700	
		72		± 0.710	
		73		± 0.720	
		74		± 0.730	
		75		± 0.740	
		76		± 0.750	
		77		± 0.760	
		78		± 0.770	
		79		± 0.780	
		80		± 0.790	
		81		± 0.800	
		82		± 0.810	
		83		± 0.820	
		84		± 0.830	
		85		± 0.840	
		86		± 0.850	
		87		± 0.860	
		88		± 0.870	
		89		± 0.880	
		90		± 0.890	
		91		± 0.900	
		92		± 0.910	
		93		± 0.920	
		94		± 0.930	
		95		± 0.940	
		96		± 0.950	
		97		± 0.960	
		98		± 0.970	
		99		± 0.980	
		100		± 0.990	
		101		± 1.000	

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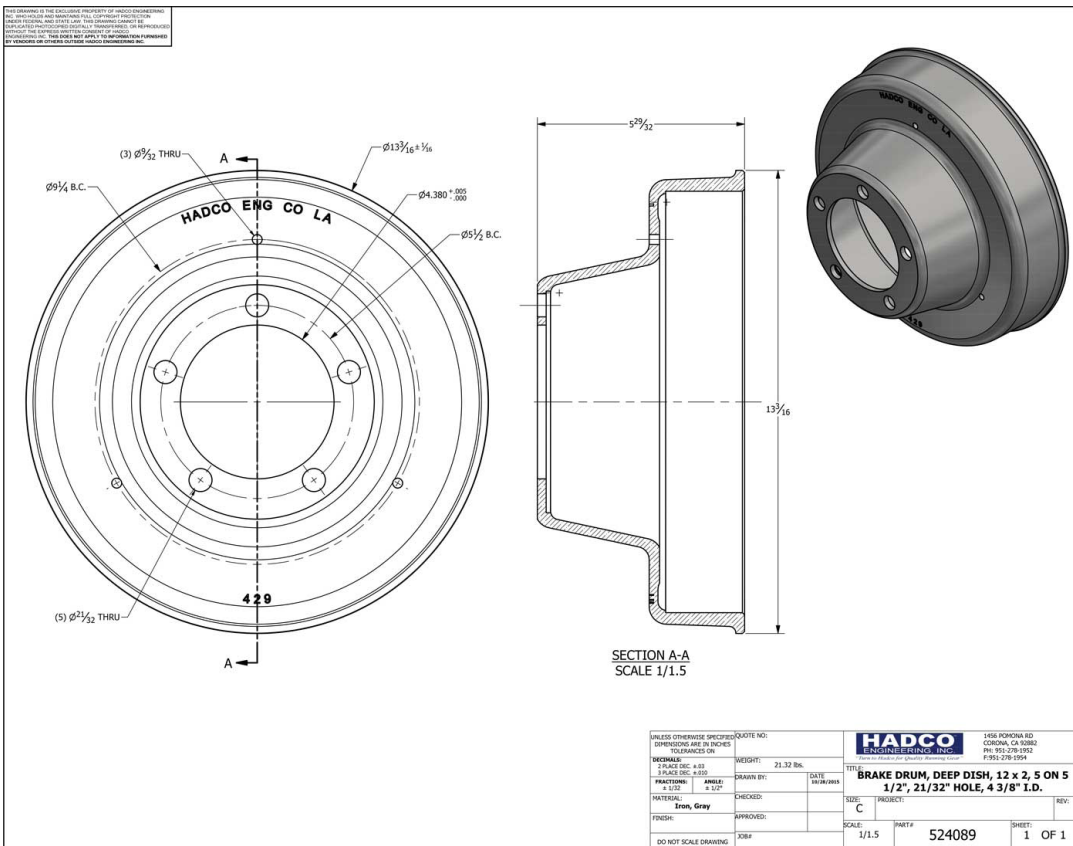
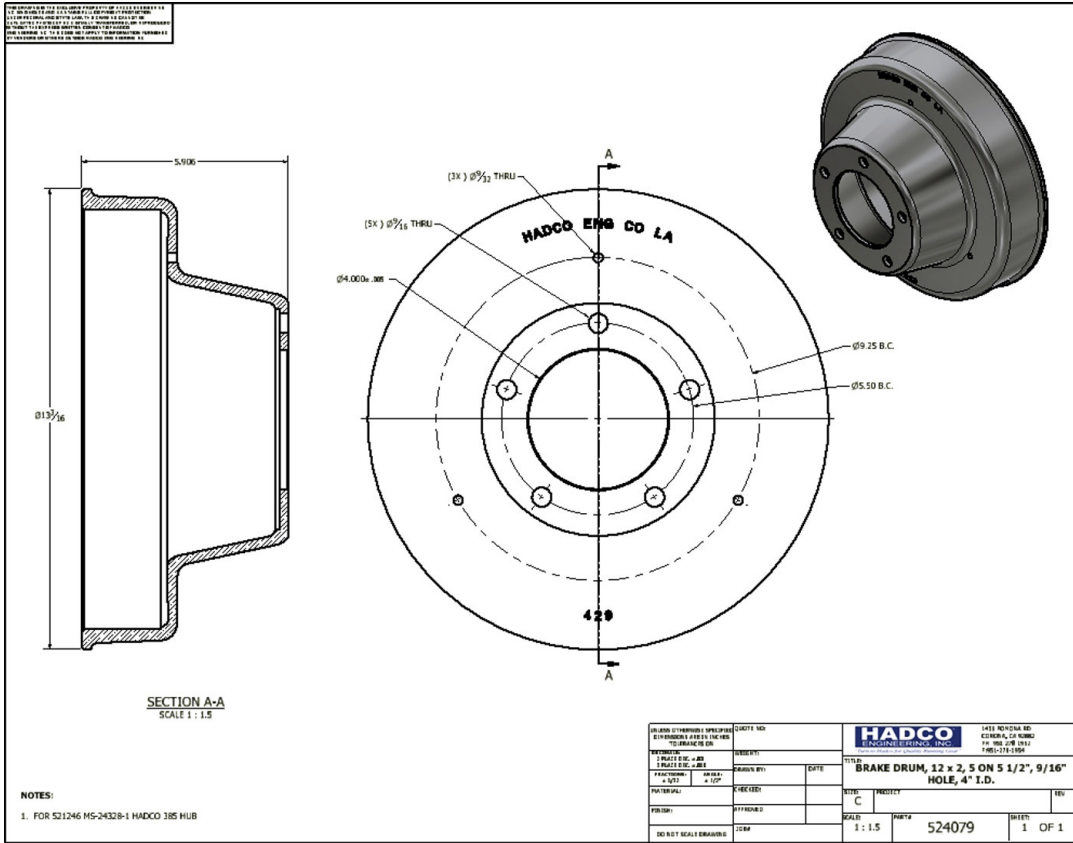


SECTION A-A  
SCALE 1 : 1.5



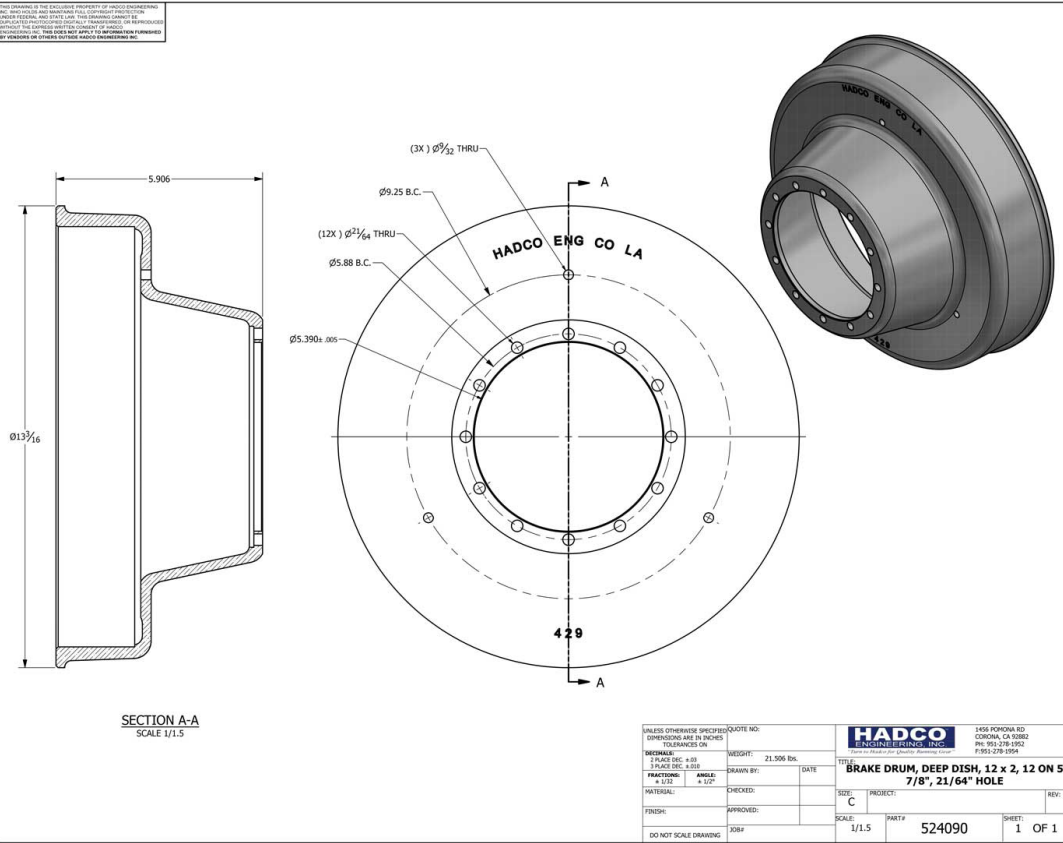
UNLESS OTHERWISE SPECIFIED QUOTE NO.		HADCO ENGINEERING, INC.		1456 POMONA RD. POMONA, CA 92882 PH 951-239-1942 F 951-239-1954	
DIMENSIONS ARE IN INCHES TOLERANCES ON:		TITLE		DATE	
FINISHES:	APPROVED:	DRAWN BY:		DATE	
DO NOT SCALE DRAWING	JOB#	SCALE:		PART#	
		1 : 1.5		524062	
		PROJECT:		REV:	
		C		1 OF 1	
		MATERIAL:		WEIGHT:	
		STEEL - CAST IRON		18.290 BIL.	
		FRACTIONS:		TOLERANCES ON:	
		1/32		± 0.001	
		3/32		± 0.002	
		1/2		± 0.005	
		1		± 0.010	
		2		± 0.015	
		3		± 0.020	
		4		± 0.030	
		5		± 0.040	
		6		± 0.050	
		7		± 0.060	
		8		± 0.070	
		9		± 0.080	
		10		± 0.090	
		11		± 0.100	
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		15		± 0.140	
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		17		± 0.160	
		18		± 0.170	
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		20		± 0.190	
		21		± 0.200	
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		23		± 0.220	
		24		± 0.230	
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		27		± 0.260	
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		41		± 0.400	
		42		± 0.410	
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		62		± 0.610	
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		64		± 0.630	
		65		± 0.640	
		66		± 0.650	
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		69		± 0.680	
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		75		± 0.740	
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		100		± 0.990	
		101		± 1.000	

# BRAKES DRUMS(#5)

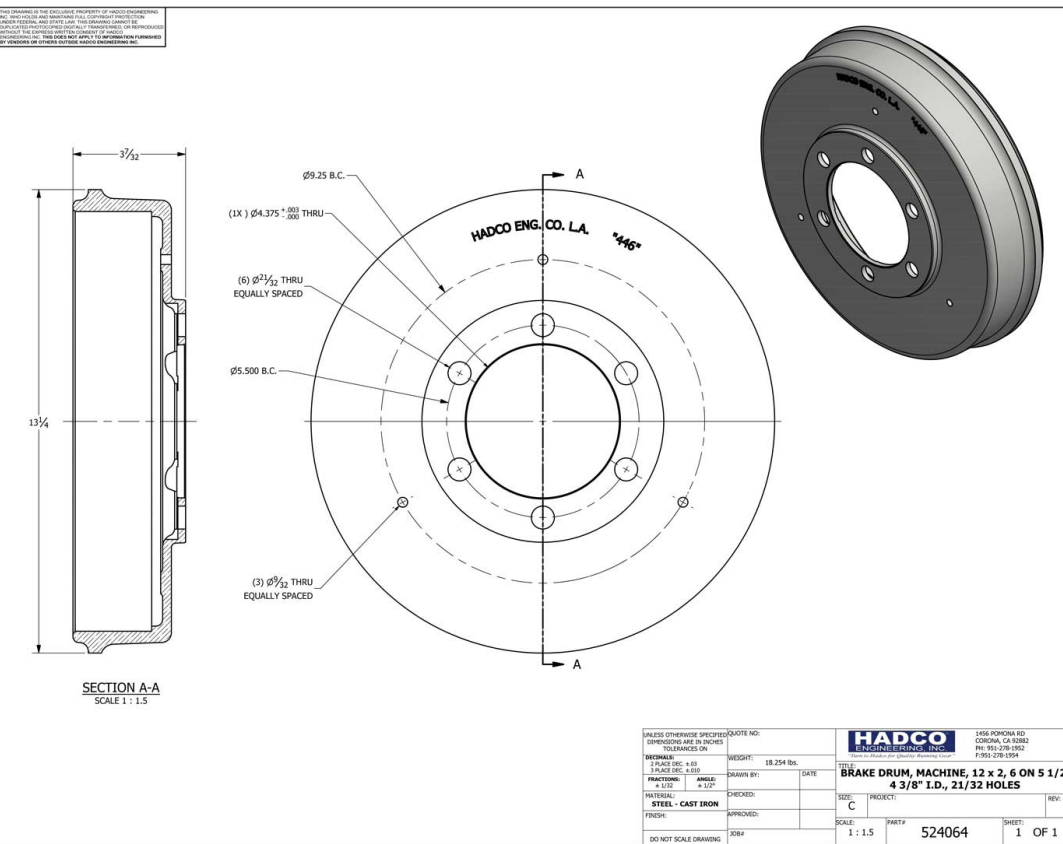


# BRAKES DRUMS(#6)

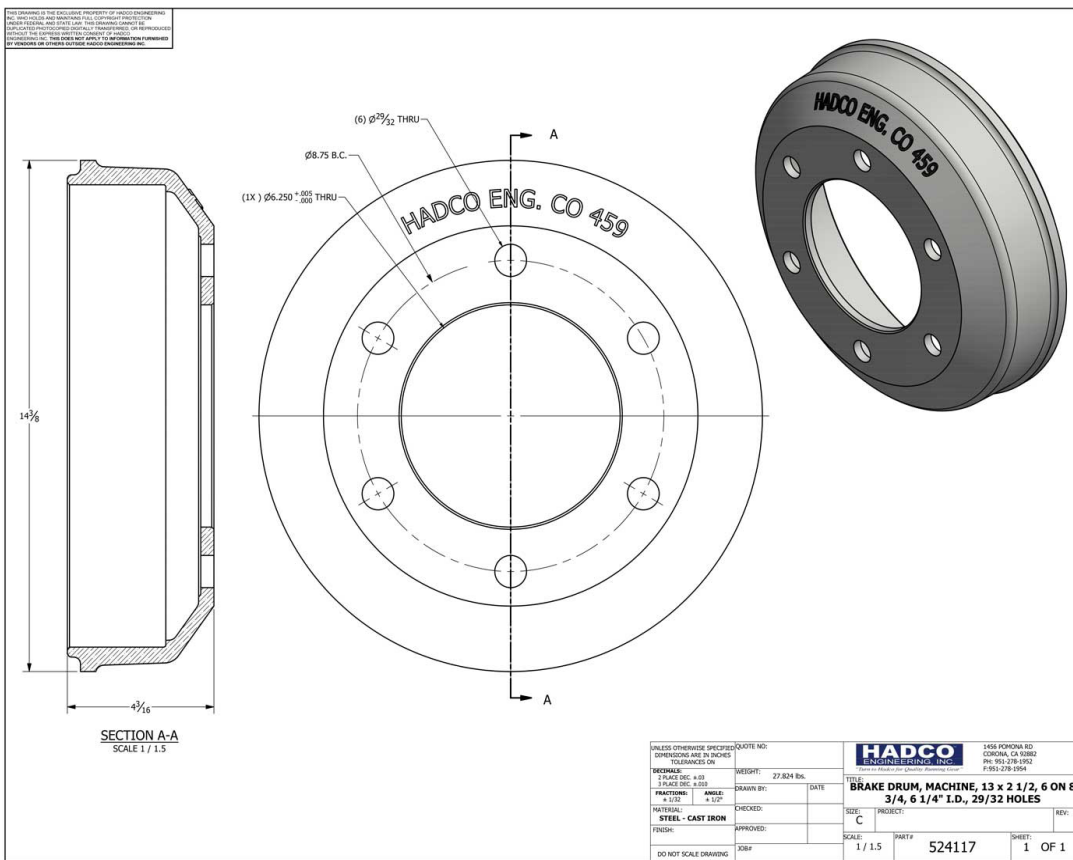
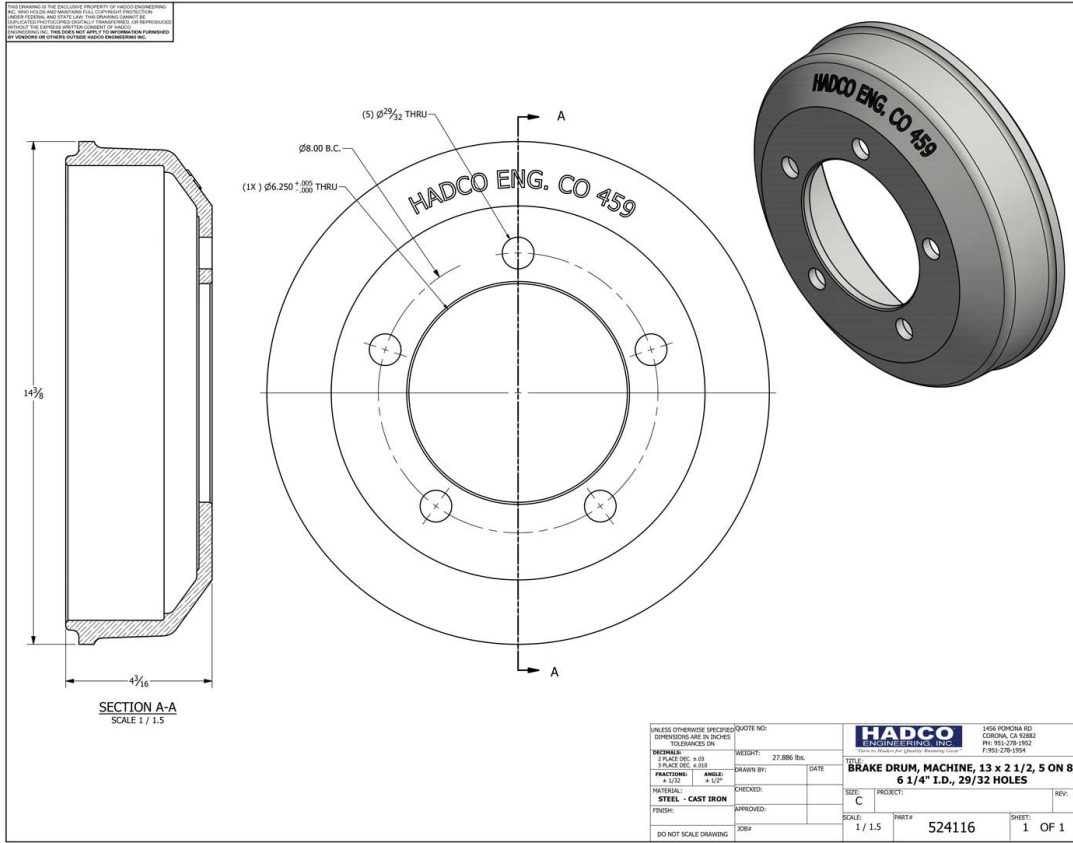
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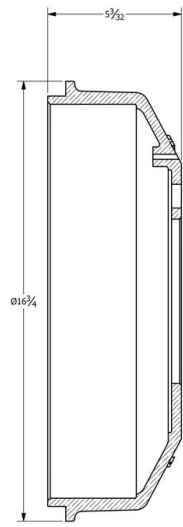


# BRAKES DRUMS(#7)

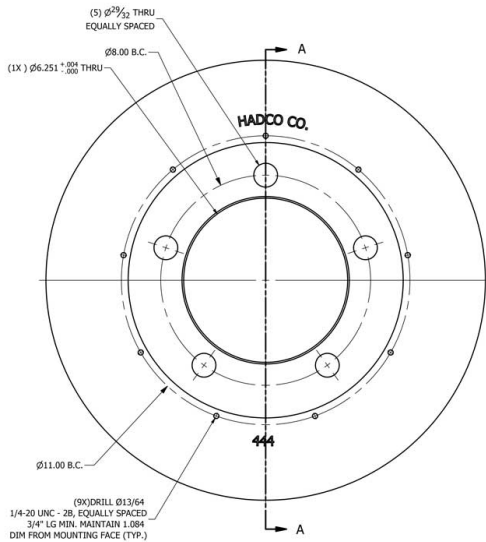


# BRAKES DRUMS(#8)

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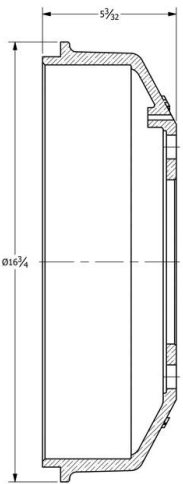


SECTION A-A  
SCALE 1 / 2

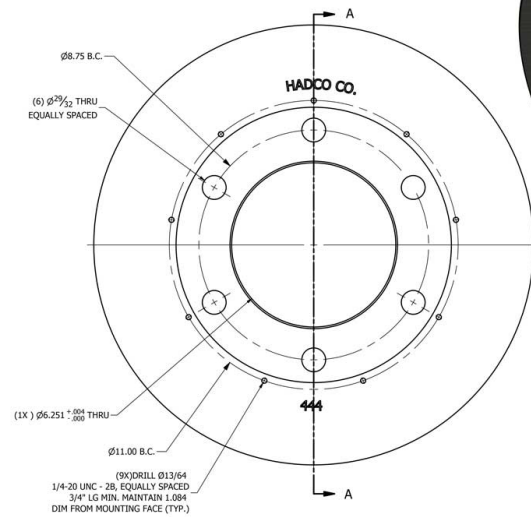


UNLESS OTHERWISE SPECIFIED QUOTE NO.		HADCO ENGINEERING, INC.		1456 POPPONA RD CORONA, CA 92688 PH: 951-278-1502 F: 951-278-0594	
DIMENSIONS ARE IN INCHES TOLERANCES ON:		WEIGHT: 38.772 BLS.	DATE:	TITLE: BRAKE DRUM, MACHINE, 15 x 3, 5 ON 8, 6.251 I.D., 29/32 HOLES	
FINISH: STEEL - CAST IRON	APPROVED:	CHECKED:	DRAWN BY:	SCALE: 1 / 2	REV:
DO NOT SCALE DRAWING	JOB#	SCALE: 1 / 2	PART# 524170	SHEET: 1 OF 1	

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SECTION A-A  
SCALE 1 / 2



UNLESS OTHERWISE SPECIFIED QUOTE NO.		HADCO ENGINEERING, INC.		1456 POPPONA RD CORONA, CA 92688 PH: 951-278-1502 F: 951-278-0594	
DIMENSIONS ARE IN INCHES TOLERANCES ON:		WEIGHT: 38.709 BLS.	DATE:	TITLE: BRAKE DRUM, MACHINE, 15 x 3, 6 ON 8 3/4, 6.251 I.D., 29/32 HOLES	
FINISH: STEEL - CAST IRON	APPROVED:	CHECKED:	DRAWN BY:	SCALE: 1 / 2	REV:
DO NOT SCALE DRAWING	JOB#	SCALE: 1 / 2	PART# 524172	SHEET: 1 OF 1	

# TIRES & WHEELS<sup>(#1)</sup>

## SELECTION PROCEDURE

1) To meet the requirements of MIL-M-8090C, wheels and hubs should be selected in accord with the appropriate Industrial Wheel Chart, Transport Single Wheel Chart, or Transport Dual Wheel Chart

2) For commercial standards Hadco can supply wheels for all tire sizes shown in this catalog.

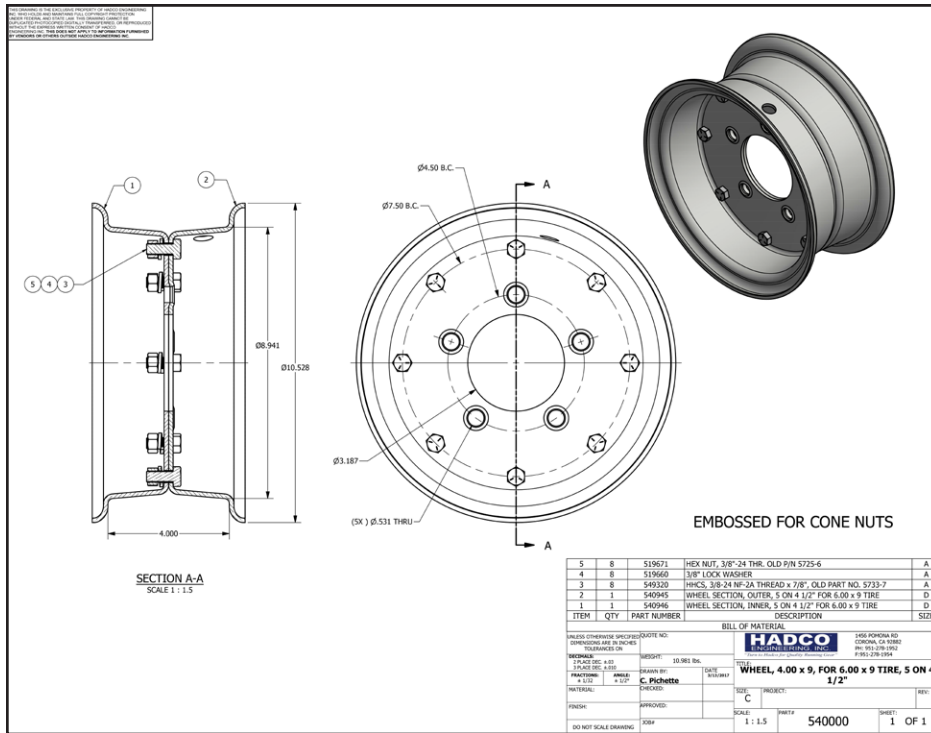
## INDUSTRIAL WHEEL CHART

Wheels for Industrial Tires						Capacity			
Wheel Size	Tire Size (Ply)	Wheel P/N	Specification	Weight	Hadco Hub Series	Infl.	10 MPH	Infl.	60 MPH
6X31/4	4.10/3.50-6(4)	540400	MS24323-1	4	390	85 psi	580		
8X33/4	4.80/4.00-8(6)	540403	MS24324-1	8	390	100 psi	1030	90 psi	745
8X41/4	5.00X8(Solid)	540402	Commercial	9.1	3140	Solid	1675		
9X4	6.90/6.00-9(10)	540406	MS24325-1/	11	385	100 psi	1995	100 psi	1510
9X4	6.00x9(Solid)	540000	Commercial	11	2R	Solid	2080		
10X5 1/2	7.50/10(10)	540409	MS24326-1	19.2	385	100 psi	2965	90 psi	1975
10X5 1/2	9.00/10(10)	540409	MS24326-1	19.2	385	75 psi	3580		
10X5 1/2	24-7.7(14)	540418	Special	29.4	3047	135 psi			

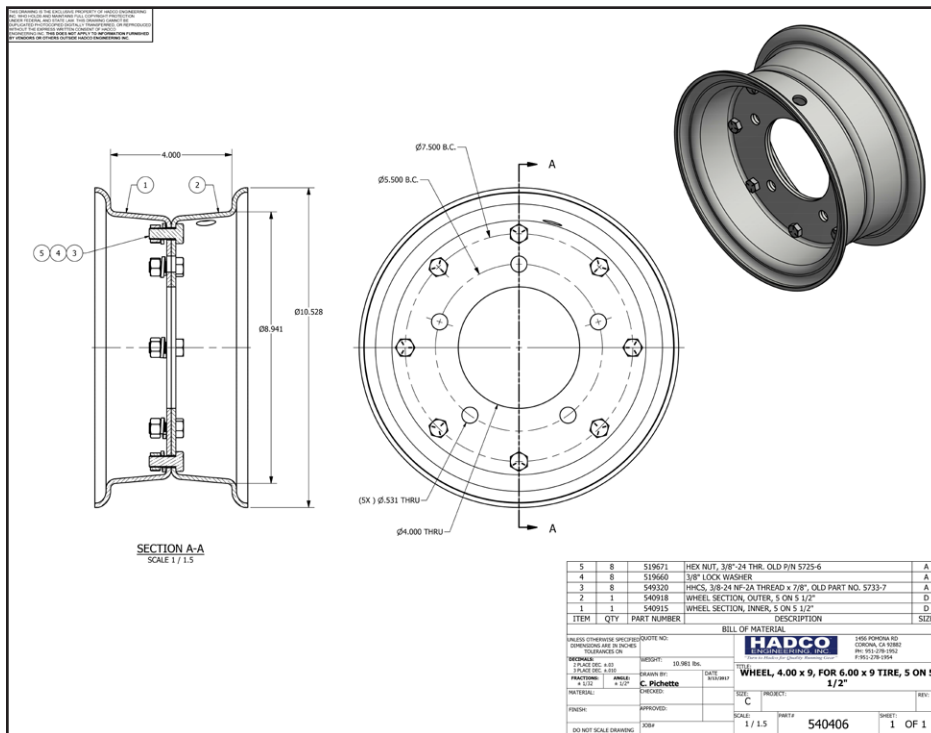


# TIRES & WHEELS (#3)

## 540406 WHEEL 5 ON 5 1/2 B.C.



## 540402 WHEEL EMBOSSED FOR CONE NUTS 5 ON 4 1/2 B.C.





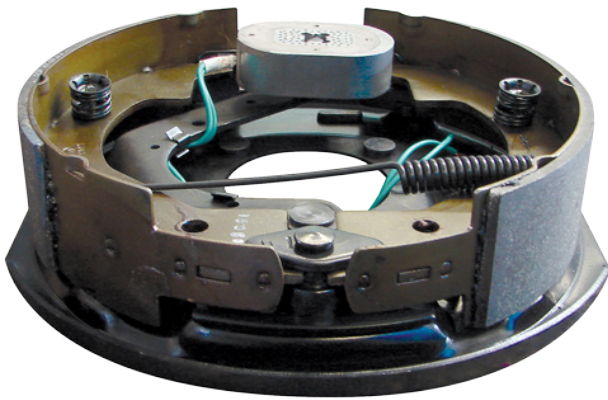
# ELECTRIC BRAKES

Hadco offers a complete line of service brakes and actuating kits. Parking lever and parking brake linkages are available for some brakes as noted.

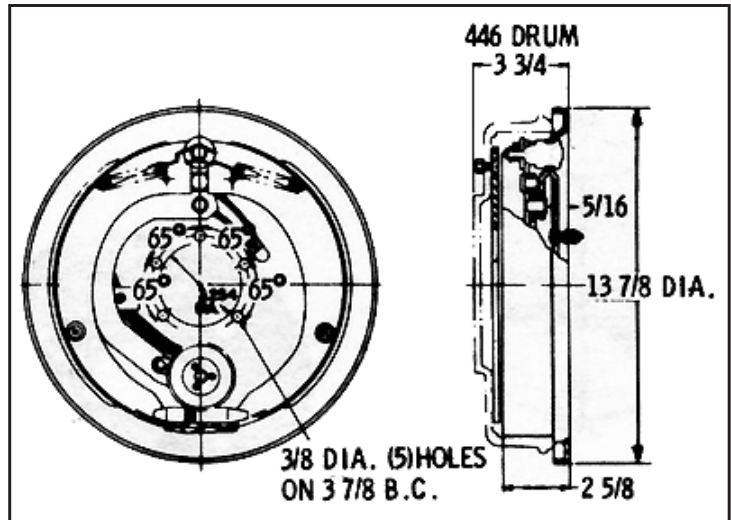
## Brake Stopping Capacity

1. Rated stopping capacity is given per axle (set of two brakes) for highway service.
2. Contact Hadco Sales Department for brake capacity on slow speed vehicles or for information on special brake applications.
3. Stopping capacity decreases as tire size is increased.

### 12 x 2 - 12V Part #'s 518162 ( R.H.) 518163 ( L.H.)



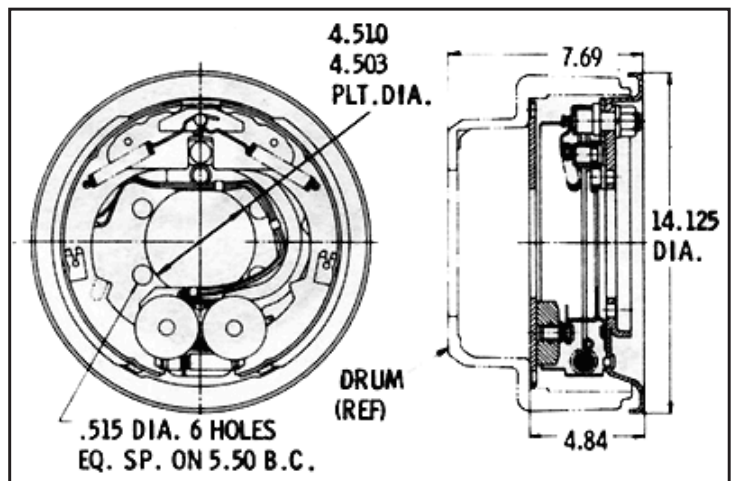
- Includes mounting hardware.
- Nominal stopping capacity: 5,200 lbs. per axle with 15 inch tires.
- Specify with or without brake wire.
- Weight each 15.5 lbs.



### 12-1/4 x 3-1/2 12V Part #'s 518164 (R.H.) 518165 (L.H.)



- Includes armature plate and mounting hardware.
- Nominal stopping capacity: 8,500 lbs. with 15" tires.
- Specify with or without brake wire.
- Weight each 32 lbs.



- \*18120RH 18121LH fits 24902 & 24903 drums
- \*18164RH 18165LH fits 24300 & 24301 drums

# HYDRAULIC BRAKES

Hadco offers a complete line of service brakes and actuating kits. Parking lever and parking brake linkages are available for some brakes as noted.

## Brake Stopping Capacity

1. Rated stopping capacity is given per axle (set of two brakes) for highway service.
2. Contact Hadco Sales Department for brake capacity on slow speed vehicles or for information on special brake applications.
3. Stopping capacity decreases as tire size is increased.

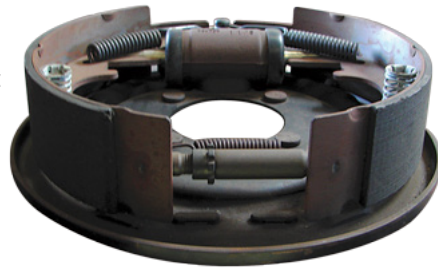
### 518329 LH / 518330 RH 10X2.25" HYDRAULIC (UNI\_SERVO) BRAKE ASSEMBLY (NO PARKING)

- Actuated By Surge Actuator
- Nominal Stopping Capacity 3,500 Lbs., Per Axle With 15" Wheels.
- Shipping Wt. 9.5 Lbs. Each



### 518541 LH / 518540 RH 10X2.25" HYDRAULIC (DUO-SERVO) BRAKE (NO PARKING)

- Activated By An Actuator
- Air Over Hydraulic or Vacuum Over Hydraulic
- Nominal Stopping Capacity 3,500 Lbs., Per Axle With 15" Wheels
- Shipping Weight 9.5 Lbs.



### 518173 RH / 518172 LH 12X2 HYDRAULIC BRAKES "UNI-SERVO (WITHOUT PARKING)

ALSO AVAILABLE "WITH PARKING"  
12X2 HYDRAULIC BRAKE-UNI SERVO  
(WITH PARKING)  
P/N 518196(LEFT HAND) & 518171  
(RIGHT HAND)



### 518168 / 518169 12 X 2 HYDRAULIC BRAKES "DUO-SERVO (WITH & WITHOUT PARKING)

12x2 HYDRAULIC BRAKE-DUO SERVO  
(NO PARKING)  
P/N 518168 (LEFT HAND) & 518169  
(RIGHT HAND)  
12X2 HYDRAULIC BRAKE-DUO SERVO  
(WITH PARKING)  
P/N 518 170(LEFT HAND) & 518171  
(RIGHT HAND)



# PARKING & SERVICE BRAKES

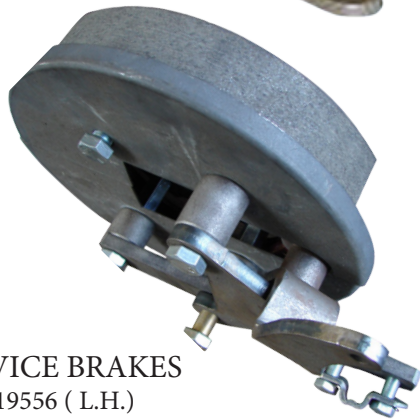
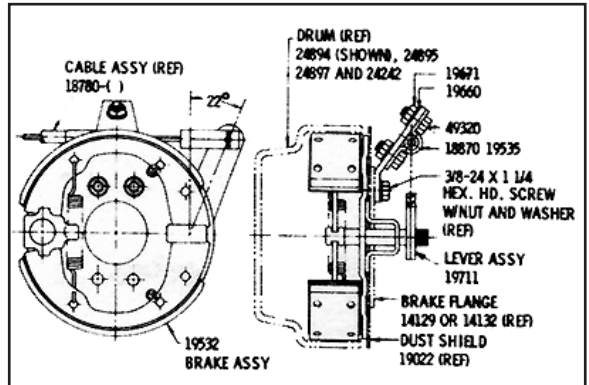
Three different types of actuating linkage systems are available for parking brakes:

- Rod Linkage.
- Hand or Foot Lever.
- Cable Linkage.

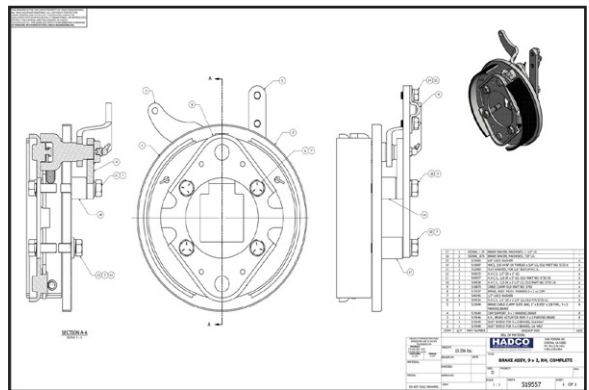
For detail information concerning these linkage systems, special designs are available upon request.



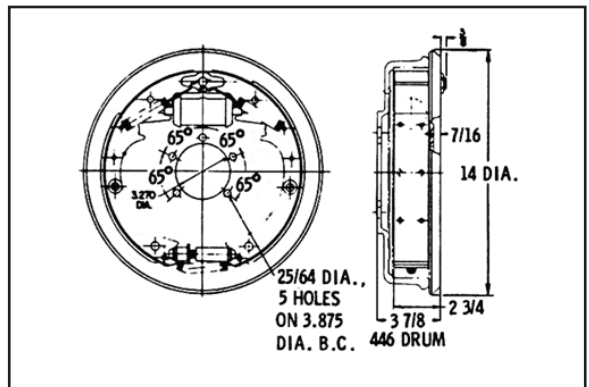
7 x 1-3/4 BRAKE Part #'s 519538 (R.H.) & (L.H.)



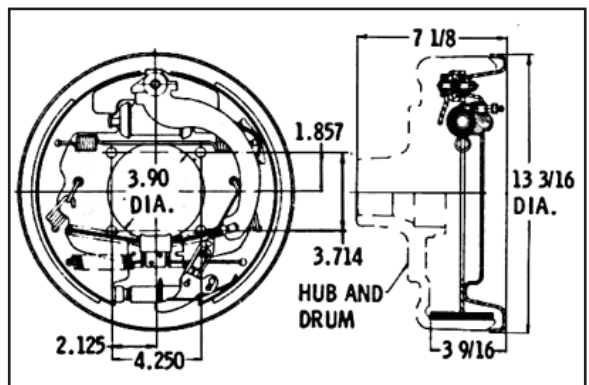
9X2 PARKING/SERVICE BRAKES Part #519557 (R.H.) & 519556 (L.H.)



12 X 2 HYDRAULIC BRAKE Part #'s 518169 (R.H.) 518168 (L.H.)

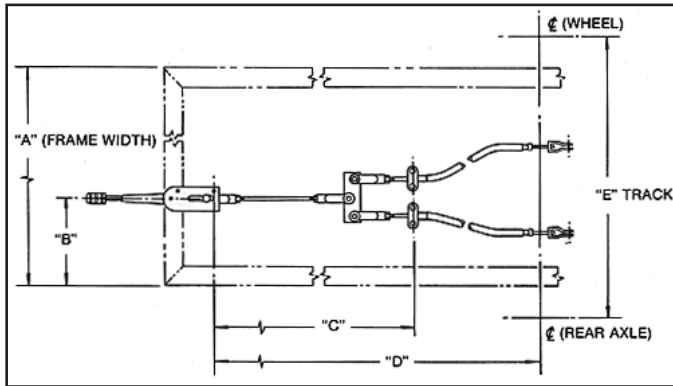


12 X 3 HYDRAULIC BRAKE  
W/O Parking Brake Part #'s 518176 (R.H.) 518177 (L.H.)  
With Parking Brake Part #'s 518178 (R.H.) 518179 (L.H.)



# BRAKE LINKAGES

TYPE 8194 LINKAGE



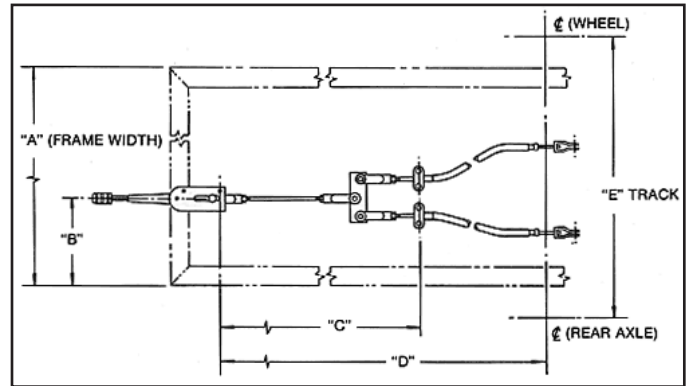
Cable linkage with over-center lever.

For actuating 19538 (7 x 1-3/4) parking brakes.

518847 Lever included with linkage assembly.

Average assembly weight - 10 lbs.

TYPE 8423 LINKAGE



Cable linkage with over-center lever.

• For actuating (12 x 2) parking brakes and hydraulic brakes with parking lever.

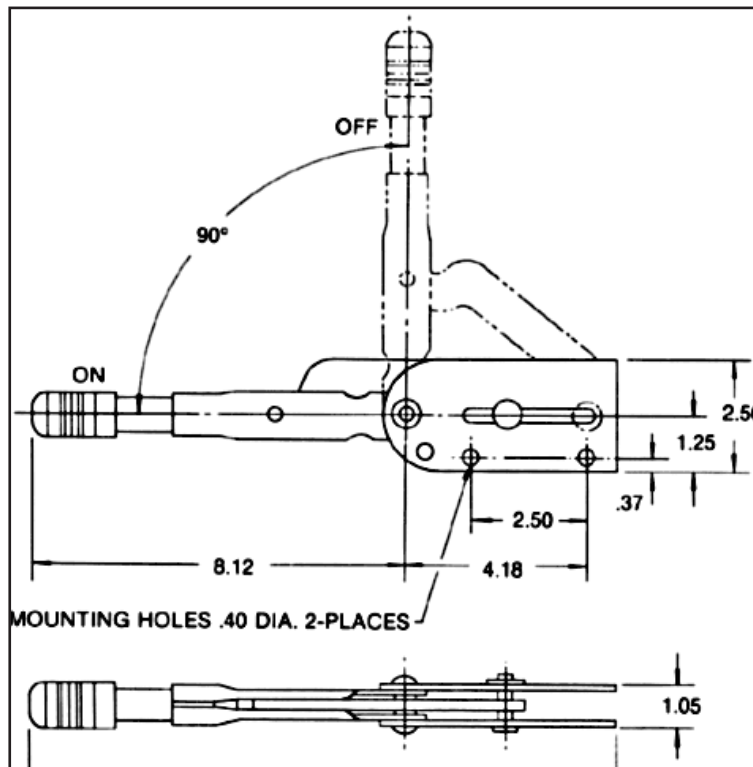
• 518847 Lever included with linkage assembly.

• Average assembly weight - 10 lbs.

## OVER CENTER TYPE HAND BRAKE LEVER - 518847

When ordering custom axle assemblies this brake linkage is included for parking brakes.

Please specify A, B, C, D & E dimensions.



- Over center type with brake adjustment built into the lever handle.
- Over center principle generates high application force.
- Weight - 4.0 lbs.

# TOWBARS

"L" TYPE



L	W/Latch	WO/Latch	Tube Dia.	A
48"	551005	551330	3"	3-1/2
72"	551007	551333	3"	3-1/2
*48"	551565		3"	3-1/2
*72"	551566		3"	3-1/2

\* Brake activating drawbar.

"M" TYPE



L	W/Latch	WO/Latch	Tube Dia.	A
48"	551345	551347	3"	3"
72"	551346	551348	3"	3"

"H" TYPE



L	W/Latch	WO/Latch	Tube Dia.	Pivot Set	A
48"	551036	521034	4"	549064	4
72"	551037	551035	4"	549064	4
48"	551055	551069	4"	549065	4
72"	551057	551071	4"	549065	4
48"	551080	551084	4"	549071	4
72"	551082	551086	4"	549071	4
*48"	551006	551010	4"	549071	4
*72"	551564	551012	4"	549071	4

\* Surge brake

"D" TYPE



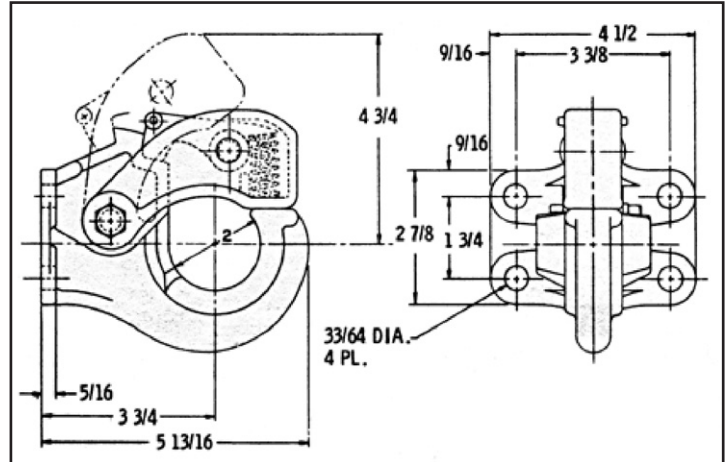
L	W/Latch	WO/Latch	Tube Dia.	A
48"	551060	551341	4	5-3/8
72"	551062	551340	4	5-3/8
*48"	551038	551024	4	5-3/8
*72"	551039	551027	4	5-3/8

\* Surge brake

# PINTLE HOOKS

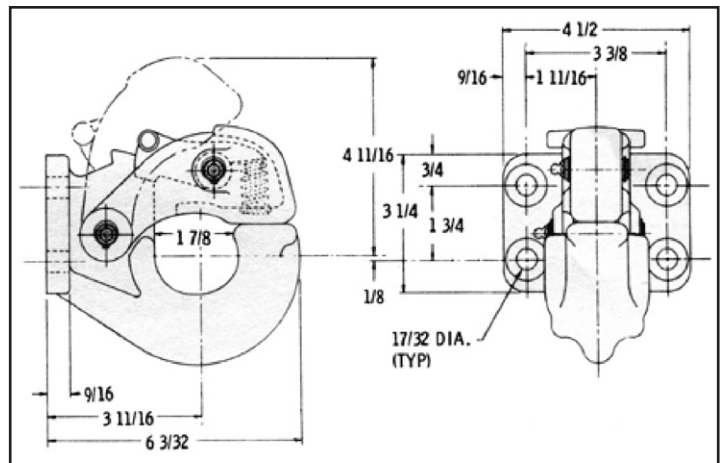
## 528052 Pintle Hook

Capacity - 10,000 lbs. Gross • Trailer Weight SAE Rating.  
Locking pin & chain included. • Weight - 6.5 lbs.



## 528056 Pintle Hook

Capacity - 30,000 lbs. Gross • Trailer Weight SAE Rating • Locking pin & chain included.  
Conforms to MS 51335-2 • Conforms to Ordinance #C8380198 • Weight - 10 lbs.

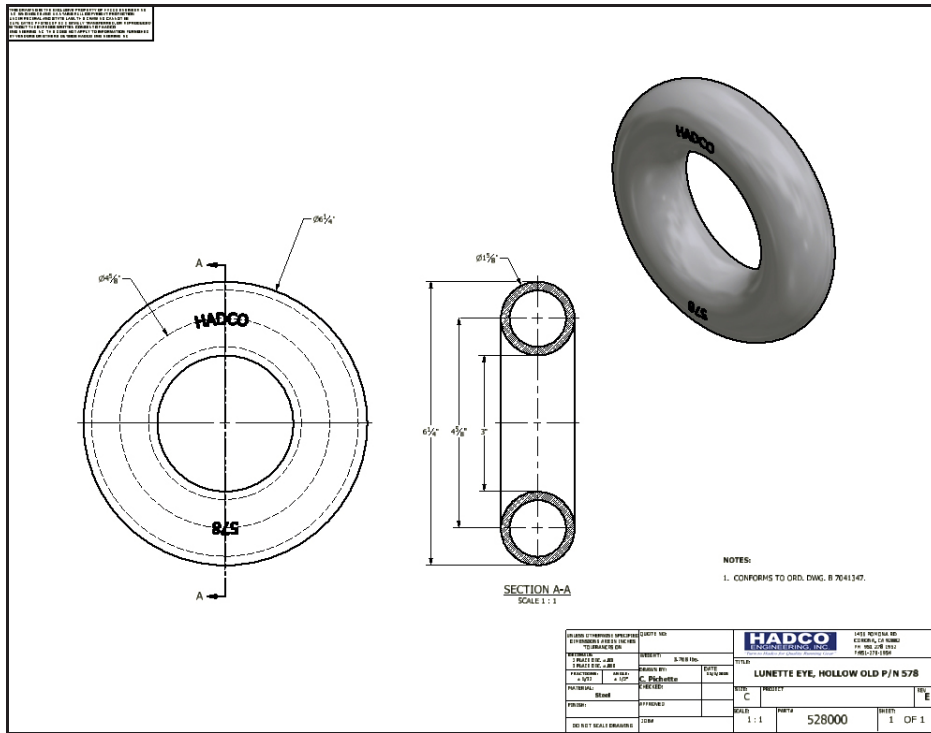


# LUNETTE EYES

## 528000 Hollow Lunette Eye

Capacity - 15,000 lbs. Gross Trailer Weight w/hinged drawbar.

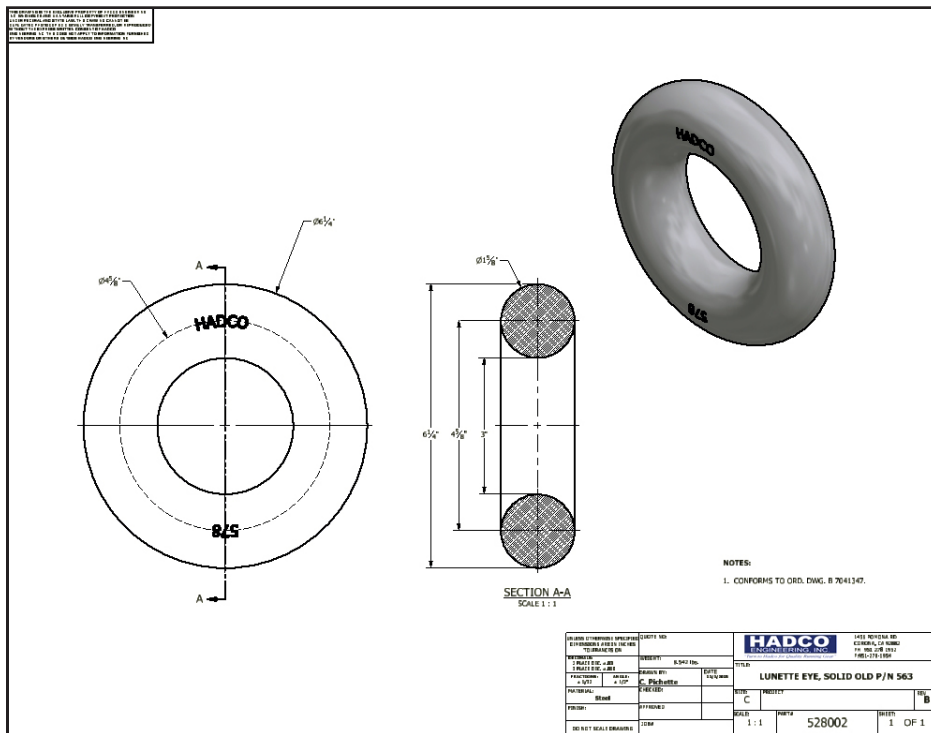
Conforms to Ordinance Dwg. B7041347 • Weight - 3.5 lbs.



## 528002 Solid Lunette Eye

Capacity - 30,000 lbs. Gross Trailer Weight w/hinged drawbar.

Conforms to Ordinance Dwg. B7041347 • Weight - 9 lbs.

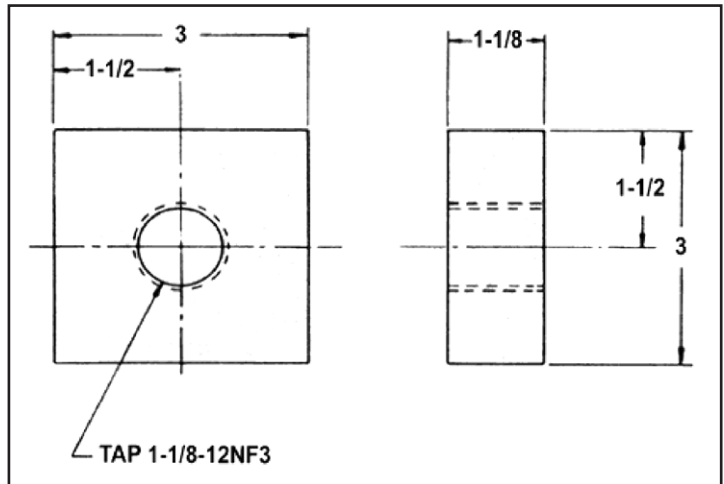
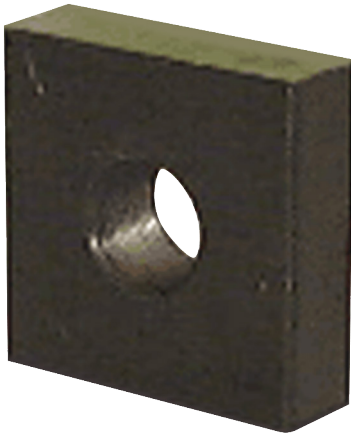




# TIE DOWN RING "MOUNTING BLOCKS"

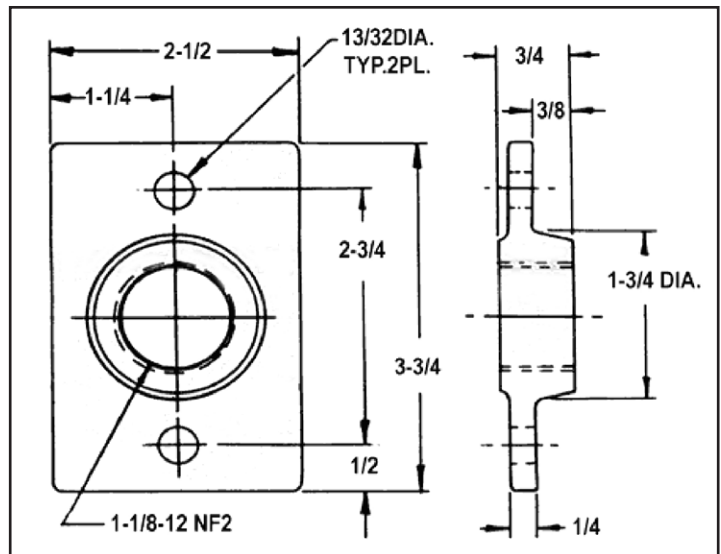
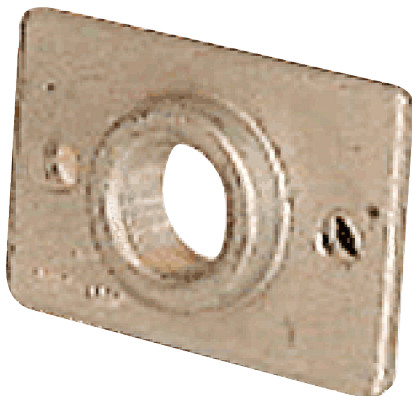
## 528010

- 5,000 lbs. capacity
- Conforms to Air Force drawing #48B7385
- Weight - .90 lbs



## 528012

- 0,000 lbs. capacity
- Conforms to Air Force drawing #48B7796
- Weight - .81 lbs.



# LIMITED WARRANTY

Hadco Industries, Inc., warrants all new products to be free from defects in material and workmanship for the sooner of:

- a. 12 Months after delivery to the original user
- b. 18 Months after shipment by Hadco Industries, Inc.

Our obligation under this warranty is limited to, at our option, the repair or replacement of any parts which, under normal use and maintenance, prove to be defective in material or workmanship, and only when such parts are returned to us, or to a point designated by us, transportation prepaid, subject to our inspection and approval.

This warranty does not obligate us to bear the cost of transportation charges in connection with the replacement or repair of defective parts, nor shall it apply to normal wear nor to any unit which has been subjected to misuse, neglect, or accident, nor to any unit which has been repaired or altered outside of our factory so as, in our judgment, to affect its performance.

We make no warranty in respect to items not of our manufacture. These items are subject to warranties of their respective manufacturers through their respective service organizations.

We shall in not event be liable for consequential damages or contingent liabilities arising out of the failure of any equipment or parts to operate properly. This warranty is in lieu of all other warranties, whether express or implied, including the warranties of merchantability and fitness for particular use.



*“Turn to Hadco for Quality Running Gear”*

**Corporate Office**

2915 E. Ricker Way

Anaheim, CA. 92806

Phone: (951) 278-1952

Fax: (951) 278-1954

[www.hadcoengineering.com](http://www.hadcoengineering.com)