



## HARDWARE & LUBRICATION

REVISED DATE 08/23



# **PARTS** CATALOGUE

## **SECTION 4**

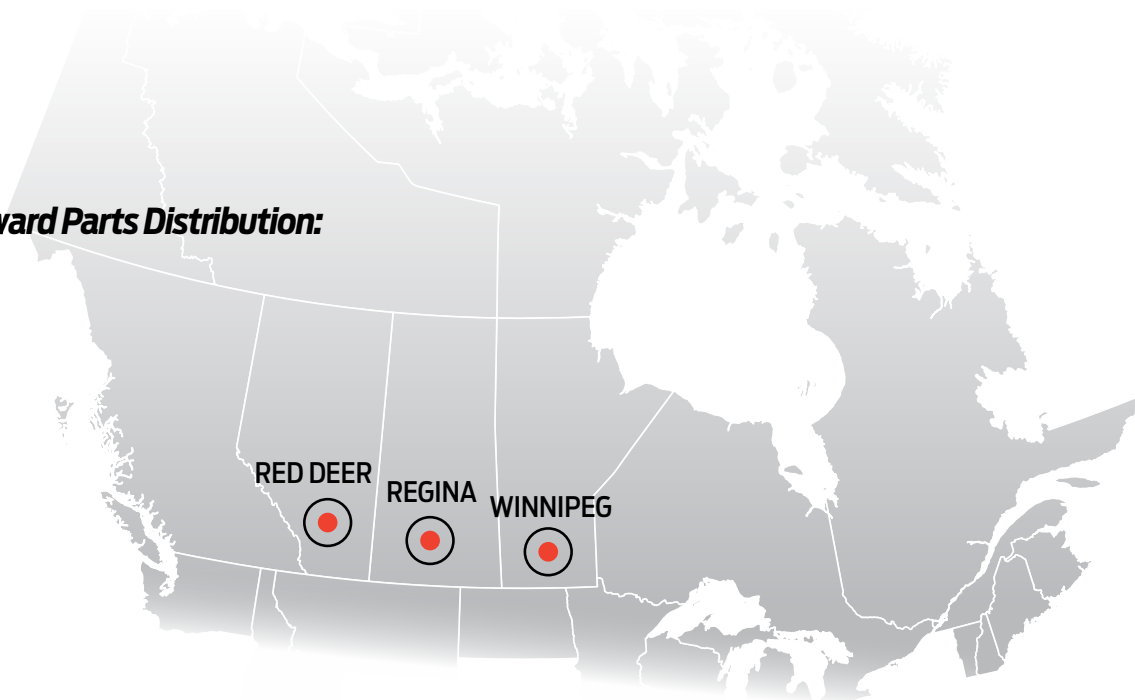
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**WESTWARDPARTS.COM**

# ***Westward has the part!***

***Westward has the part!*** That's our commitment to you, and that's what sets us apart. Westward Parts has over 50 years of expertise with all makes of agricultural parts, sprayer parts, sprayers, as well as ground maintenance and estate equipment. Our Canadian dealers are served from three different warehouse locations across the country. Westward Parts offers our dealers the most comprehensive product portfolio and exclusive product offerings. And it will all be delivered on time, with an enjoyable customer service experience that won't let you down.

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## LUBRICATION

### Canola Based Diesel Fuel Conditioner

Did You Ever Consider Insurance for Your Diesel Engine and Injector Pump?

- Biotech Diesel Fuel Conditioner
- Improves Lubricity
- Cleans Injector Systems
- Enhances Engine Performance
- Environmentally Responsible
- Made in Canada



PART NO.	DESCRIPTION	SIZE
LUBDFC-250ML	Milligan Biotech Diesel Additive	250 mL
LUBDFC-1L	Milligan Biotech Diesel Additive	1L
LUBDFC-5L	Milligan Biotech Diesel Additive	5L

Milligan Biotech Diesel Fuel Conditioner is a canola based product created to address lubricity concerns about commercial diesel fuels. Recent environmental legislation requiring the reduction of sulfur and aromatic compounds in diesel fuel, both in Canada and the United States, has dramatically lowered the lubricity characteristics of untreated fuel. Refiners do blend petrochemical lubricants into commercial fuel products, but there is still room for improvement. As recently as 1998, world-wide fuel surveys conducted by Paramins of the UK have indicated that Canadian diesel fuels were among the poorest performers on lubricity tests. Researchers at the University of Saskatchewan have examined a number of environmentally friendly alternatives to petrochemical additives to improve our fuel.

With support from Agriculture and Agri-Food Canada, Sask. Agricultural Development Fund, and the Sask. Canola Development Commission, these studies led to testing a number of biodiesel additives derived from different vegetable oils. According to Professor Barry Hertz of the Mechanical Engineering Department at the U of S., "the canola based products seem to be superior to most others that we've investigated." As reported in the SCDC publication "Extending Diesel Engine Life and Fuel Economy with Canola Based Fuel Additives", the addition of even small amounts of canola methyl ester (CME or biodiesel) or a canola oil with derivative (COD) can substantially improve the lubricity performance of commercially available diesel fuels. As little as 0.5% canola biodiesel and 0.1% canola oil derivative (COD) reduced engine wear by up to 50% and improved fuel economy by up to 13% on actual road tests.

Milligan Biotech Diesel Fuel Conditioner is a proprietary blend of canola based products which combines the excellent deposit cleaning properties of biodiesel with the outstanding fuel additive with superior lubricity properties of both canola biodiesel and canola oil derivatives. The result is an environmentally responsible fuel additive with superior lubricity that improves engine performance and extends engine life. Mixed at the recommended ratio of 1 L to 1000 L of fuel it adds less than 2 cents to the cost of a liter of fuel.

### Canola Based Penetrating Oil

- Prairie Clean
- Loosen Rusted And Seized Nuts And Bolts
- Excellent Lubricator And Rust Remover
- 100% Canola Based
- Environmentally Responsible
- Made In Canada



PART NO.	DESCRIPTION	SIZE
LUBPO-313G	Prairie Clean Penetrating Oil, Aerosol	313 g

### Metal Working Fluids

**METAL WORKING FLUID SPRAY:** Multi-purpose cutting oil for drilling, tapping, sawing and grinding. Available in a handy 12 oz/ 340 g aerosol can with extender tip.

**NO. 35 SOLUBLE OIL:** Multi-purpose, water soluble cutting oil which forms a stable, milky white emulsion that does not readily decompose, separate or evaporate.



WATER SOLUBLE PRODUCTS	PRODUCT	MIX: OIL TO MACHINING	WATER RATIO GRINDING
General Purpose	No. 35	1-5 to 1-20	1-40
Heavy Duty	Cut-N-Cool	1-5 to 1-10	1-40
Biodegradable	Metsol or HP-76	1-5 to 1-20	1-50

PART NO.	SIZE
LUB18563	12 oz/ 340 g
LUB57656	1 Gallon

## Worx - All Natural Hand Cleaners

### STANDARD FEATURES

- First Hand Cleaner to Obtain Environmental Certification
- Lift Stains without Damaging, Drying or Cracking Skin
- Neutral PH Balanced, Eliminates Foul Odors
- Helps Prevent Dermatitis & Promotes Healing
- Removes Carbon, Brake Dust, Axle Grease, Graphite, Silicone, Printer's Ink, Adhesives, Gear Grease, Fresh Paint, Varnishes, Fresh Industrial Coatings, Industrial Soils, Lube Oils, Coal Dust, Solvent-Based Adhesive Residue, Glue & more...
- Does Not Contain Microbeads, Walnut Shells, Harsh Chemicals or Abrasives.
- Food Safe (CFIA Approved)
- Readily Biodegradable

PART NO.	DESCRIPTION
LUB11-1300	Worx All Natural Hand Cleaner 3lb Bag
LUB11-1450	Worx All Natural Hand Cleaner 4.5lb Bag



### APPLICATIONS

- Institutional, Residential, Commercial, Industrial Maintenance, Transportation, Manufacturing, Agriculture, Construction, Natural Resources, Environmental Services, Communication Industries and more...

### WHY CHOOSE WORX?

- Exceptional Performance
- Easy To Install
- Eco-friendly & Responsible
- Economical Cost Per Use

PART NO.	DESCRIPTION
LUB11-1104	Worx® Biodegradable Hand Cleaner 16 Oz
LUB11-1650	Worx® Biodegradable Hand Cleaner 6.5 Oz
LUB11-1224	Worx® Biodegradable Hand Cleaner 1.85oz



WORX Industrial Dispenser is heavy-duty and easy to install. Designed for locations with more than 50 employees per wash station. Comes with an easy turn knob, 1/4 turn dispenses an accurate dosage. Use with any size of WORX® Biodegradable Hand Cleaner (4.5 lb fills reservoir). Comes with easy installation and hand washing instructions.

We recommended using the WORX® 4.5 lb size (Part# LUB11-1450) with the Industrial dispenser.



PART NO.	DESCRIPTION
LUB11-9999	Worx Industrial Dispenser
LUB11-9995	Worx Shop Dispenser
LUB11-9997	Easy-Fill Dispenser

Convenient and economical the Worx® Waterless hand cleaner, is handy when you need a hand cleaner occasionally, or have limited storage space. Place it in a toolbox, bring it with you on the job or use it by a sink!



PART NO.	DESCRIPTION
LUB26-0432	Worx® Waterless-Bit 4 X 32oz Hand Cleaner
LUB26-0616	Worx® Waterless-Bit 6 X 16oz Hand Cleaner

## Fluid Film

- Environmentally Friendly
- Nature Given Material

FLUID FILM utilizes the unique molecular action derived from WOOL WAX (Lanolin) (nature given, taken from the wool of sheep). Along with other corrosion inhibiting ingredients.

One of the best lubrication and corrosion control agents found in nature today. FLUID FILM has been used for over 50 years in the highly corrosive marine environment of ships and off-shore drilling rigs.

Application:

Cars – Trucks – Buses – Boats – Tools – Home – Farm – Sports  
Industrial – Aircraft – Rv's – Marine – Battery Terminals  
Trailers – Salt Trucks – Forestry – Electrical



SILICONE/TEFLON FREE.
WILL NOT DRY OUT OR EVAPORATE.
NOT WATER SOLUBLE.
DISPLACES MOISTURE.
CAN BE APPLIED OVER DAMP/DRY SURFACES.
PREVENTS ICE/SNOW FROM BUILDING UP ON MOVING PARTS. WORKS IN SUB-ZERO WEATHER -50°F TO 350°F.
NON-CONDUCTOR. WILL NOT CAUSE STATIC ELECTRICITY.
REDUCES STRESSCORROSION.

PART NO.	DESCRIPTION
LUB1450	145 g Aerosol
LUB3300	833 g Aerosol

## Super Enamel

Through years of research and practical application, Plasti-Kote has developed the most remarkably versatile spray paint available anywhere. Plasti-Kote SUPER ENAMELS dry fast to a beautiful high gloss finish. They can be recoated anytime. The wide variety of colours and primers available are fade and chip resistant; can be used on most surfaces, indoors or out. The finish will last for years.

Totally lead free, Plasti-Kote ENAMELS are completely safe, even for children's toys and furniture. And what's more, they cover more square feet per can than the leading competition. That translates to real value. When your customers want the best...they want Plasti-Kote premium quality ENAMELS.



PART NO.	DESCRIPTION
LUBT4	Gloss White 340 g
LUBT5	Clear super lacquer 340g
LUBT12	Paint Spray 340G Shamrock Gree
LUBT16	Royal Blue 340 g
LUBT45	Paint Spry 340G Clear Acrylic
LUB623	Paint Spry 237MI Rust Convert

## Implement Enamel

TRACTOR & IMPLEMENT ENAMEL has been specially formulated to stand up against the roughest kind of outdoor exposure, and the weather resistant gloss finish protects against rust. It won't fade, chalk or peel.

Plasti-Kote TRACTOR & IMPLEMENT colours are gasoline and oil resistant. The wide variety of colours available precisely matched to the colour standard of leading farm and industrial equipment manufacturers. The perfect finish for all outdoor machinery needs.



PART NO.	DESCRIPTION
LUB1351	Deere Yellow 340 g
LUB1352	Ford Grey 340 g

PART NO.	DESCRIPTION
LUB1361	Ford Blue 340 g

## Plastic Fiberglass Repair

BEGINS TO HARDEN IN 10-15 MINUTES

Tech Plastic™ when hand mixed (kneaded) can be molded to any size, can be drilled, sawed, sanded, stained or painted. Interior & exterior applications for fast permanent repair. Excellent adhesive properties for metal or plastic repairs. Dries white, does not shrink, crack, rot or pullaway, non-yellowing and rustproof. Cures underwater (fresh & saltwater), excellent for plumbing repairs on PVC, ABS, faucets, fixtures, ceramic tile, porcelain, stripped screw holes, water tanks, tubs, gutters, seals, electrical wires, plastic bumpers, battery cases, fish boxes, sprinkler heads, on board fuel tank leaks, many automotive and household uses.

No Home/Marine/RV tool box is complete without Tech Plastic™



PART NO.	SIZE
LUB2900	57 g

## Steel Reinforced Epoxy Putty

Steel Hard in 15 Minutes • Full Cure in 1 Hour

- PERMANENTLY ADHERES TO: Steel – Aluminum – Wood – Copper – Cast Iron – PVC – ABS – Bronze – Concrete – Plastics – Glass – Fiberglass – Ceramics – Brass & Much More!!!
- 500° temperature resistant • 3-year shelf life • Sets up under water
- Impervious to Chemicals
- Auto/Truck: Gas Tanks, Tailpipes, Mufflers, Intake Manifolds, Radiators, Blocks  
Home: Furniture, Appliances, Hot Tubs, Pools, Gutters, Screens, Glass, Woodwork  
Farm: Farm Equipment, Fuel Tanks, Troughs, Fences, Irrigation Equipment
- Marine: Fiberglass, Aluminum, Inboard/Outboard Motors, Gas Tanks, Water Tanks
- Hobbies: Crafts, Jewelry, Ceramics, Plastics, Models, Molds, Glass Toys  
Plumbing: PVC, ABS, Faucets, Fixtures, Porcelain, Copper, Brass, Stripped Screws



PART NO.	SIZE
LUB16002	57 g

## Thread Sealants

A World Leader in Anti-Seize, Sealant & Lubrication Technology

### PROPERTIES CHART

PRODUCT	PART NO.	SIZE	DESCRIPTION	APPLICATION	SERVICE RATING
Petro-Tape Thread Seal	LUB30794	3/4" x 540"	Made of pure virgin PTFE. Conforms to Military Specification MIL-T-27730A ULC listed for gas installations. Full 3 mil thick.	For heavy-duty use on lines carrying oxygen, acids, fuels, chemicals, solvents, etc.	-240°C to 260°C (-400°F to 500°F)



## Anti-Seize Compounds

- Lowers friction
- Not affected by contraction, expansion, or vibration
- Reduces wrench torque
- Will not run, drip, or settle out
- Permits reuse of fittings; saves stud, bolt, and nut replacement
- Contains no lead or zinc



PRODUCT	PART NO.	SIZE	DESCRIPTION	APPLICATION	SERVICE RATING
Kopr-Kote Anti-Seize Compound	LUB10202	225 ml 1 liter	A premium grade general purpose anti-seize compound containing copper, graphite and a combination of specialty products blended into a water-resistant, non-melting grease base.	Use on all types of threaded connections bushings, keyways, press fits, etc. to protect against seizure, heat freeze, galling, rust and corrosion.	-54°C to 815°C (-65°F to 1500°F)



## Automotive Lubricants

**No. 105 MOTOR ASSEMBLY GREASE:** A smooth light-bodied grease made especially for motor assembly. Prevents "Dry Start". Provides lubrication during the initial start up before the motor oil has circulated. Protects freshly machined engine parts from rust and corrosion.

10 oz. tube. Part No. LUB03494



PART NO.	SIZE
LUB03494	10 oz

## Lubriplate® Multi-Purpose Greases

**630 SERIES:** These very popular lithium type, multi-purpose greases are excellent for a wide range of lubrication demands, thus reducing the need to carry large grease inventories. All have high film strength, exceptional resistance to water, steam and other adverse conditions. This series is available in 4 NLGI densities for a variety of applications.

**No. 1200-2:** This is an excellent, heavy-duty, general purpose, lithium type grease for both industrial and automotive applications. It provides a high film strength, great shear stability, anti-wear and extreme pressure additives.

**1240 SERIES:** Polymer type, viscous, non-corrosive, extreme pressure greases. Highly water resistant and tacky, they are designed for applications where the grease is subjected to heavy pressure and shock loads. This series is available in 3 NLGI densities for a wide range of applications and temperatures.

**No. 3000 and 3000-W:** These tacky, moly, extreme pressure greases provide durable, tenacious, adhesive films to protect against water, rust and corrosive contaminants. 3000-W is for cold ambient temperatures. Excellent for construction and mining applications.



PART NO.	LUBRI-PLATE PRODUCT	GREASE TYPE	NLGI GRADE	OIL VIS. SUS. @100°F/38°C	WORKED PENETRATION @77°F/25°C	ASTM DROP POINT	APPROX. COLD TEST	AW/EP	SIZE (OZ)	LUBRICITY RUST/OXID. ADDITIVES	WATER RESISTANT	APPLICATIONS/ COMMENTS
LUB07298	630-2	LITHIUM	2	750	265/295	380°F/193°C	0°F/-18°C	AW/EP	14	YES	YES	Multi-purpose, general, greasing, bearings
LUB10298	1200-2	LITHIUM	2	950	265/295	400°F/204°C	-25°F/-32°C	AW/EP	14	YES	YES	Very popular general purpose industrial and automotive grease
LUB10698	1242	LITHIUM	2	1250	265/295	425°F/218°C	15°F/-9°C	AW/EP	14	YES	YES	Heavy-duty construction equipment, front end loaders, etc.
LUB10898	3000	MOLY-LITHIUM	2	1250	265/295	450°F/232°C	0°F/-18°C	AW/EP	14	YES	YES	For heavy-duty, moly type grease construction equipment

## Lubriplate FMO-AW

The LUBRIPLATE FMO-AW Series of Lubricants was developed in order to meet the ever-increasing demands of pressure, speed and temperature that are placed on modern food machinery. These premium food machinery lubricants are fully formulated with non-toxic, USP white mineral oils and are fortified with anti-oxidants, corrosion inhibitors, anti-wear agents and foam suppressants.

- Fortified with maximum strength antioxidant
- Thermally and oxidatively stable
- Zinc-free

PART NO.	SIZE
LUBL0880-054	CTN 12/1 qt bottles



## Greases for Special Conditions and Applications

**HIGH TEMP:** LUBRIPLATE High Temp is a new development for extreme high temperature applications. This lubricant is of the non-melt type and manufactured with high viscosity oils of exceptional stability. For high temperature applications. Workable from 40°F/4°C to 510°F/266°C and up to 550°F/288°C for short intervals.

**LOW TEMP:** is an anhydrous calcium, NLGI 1-1/2 grade lubricant with excellent cold operating characteristics. LUBRIPLATE Low Temp is an unusual lubricant having many applications other than the applications suggested by the name. LUBRIPLATE Low Temp has a wide operating range from pumpability at -60°F to an ASTM Dropping Point of 280°F, providing a workable range from -60°F to 250°F.

**MAG-1** is a polymer type lubricant for both plain and anti-friction bearings, gears, cams and slides that will provide long service over a wide temperature range. LUBRIPLATE MAG-1 is especially designed to provide high film strength and also to provide for low torque or power reduction. LUBRIPLATE MAG-1 is designed to provide lubrication over a wide temperature range from -60°F (-51°C) to +300°F (149°C). LUBRIPLATE MAG-1 saves energy, time, money and lubricants.



PART NUMBER	LUBRI-PLATE PRODUCT	GREASE TYPE	NLGI GRADE	SIZE	OIL VIS. SUS. @100°F/38°C	WORKED PENETRATION @77°F/25°C	ASTM DROP POINT	APPROX. COLD TEST	AW/EP	LUBRICITY RUST/OXID. ADDITIVES	WATER RESISTANT	APPLICATIONS/ COMMENTS
LUB16198	High Temp	BENTONE	2	14	2600	265/29	NON-MELT	0°F/-18°C	AW	YES	YES	Multi-purpose, general greasing, bearings.
LUB17298	Low Temp	ANHY-DROUS CALCIUM	1.5	14	90	290/320	280°F/138°C	-60°F/-51°C	AW	YES	YES	Cold temp., multi-purpose, freezers, fifth wheels.
LUB18998	MAG-1	LITHIUM POLYMER	1	14	120	310/340	375°F/191°C	-60°F/-51°C	AW/EP	YES	YES	Cold and wide temperature range, bearings, cam slides.

## Lubriplate® Spray Lubricants

**CHAIN & CABLE FLUID SPRAY:** Superior penetrating oil. A cleansing non-gumming oil. Lubricates wire rope, chains, cables, any moving metal surfaces. Prevents rust and corrosion. Protects brightwork, loosens rusty nuts and bolts. Excellent drilling, tapping and sawing oil.

**METAL WORKING FLUID SPRAY:** A specially developed product for metal working operations. Excellent for drilling, tapping, sawing and grinding.

*Lubriplate Spray Lubricants do not contain fluorocarbons or 1, 1, 1-Trichloroethane.*



PART NO.	SIZE
LUB13563	12 oz/ 340 g

PART NO.	SIZE
LUB18563	12 oz/ 340 g

## Food Machinery Greases/Class H-1

**FGL SERIES:** Designed to meet the demands of food and beverage industry plant engineers who want USDA authorized\* Class H-1 greases to totally replace H-2 greases. Fortified with anti-wear, anti-rust and anti-corrosion additives and heavy base oils which combine to yield excellent shear stability, load carrying capability and resistance to water and caustic wash down. Available in four NLGI densities for a variety of applications.

**FML SERIES:** These white, multipurpose greases have been leaders in the food processing industry for years. USDA H-1 authorized. 14 oz cartridge.



PART NUMBER	LUBRIPLATE PRODUCT	GREASE TYPE	NLGI GRADE	OIL VIS. SUS. @100°F/38°C	WORKED PENETRATION @77°F/25°C	ASTM DROP POINT	APPROX. COLD TEST	AW/EP	LUBRICITY RUST/OXID. ADDITIVES	WATER RESISTANT
LUB23298*	*FGL-2	Aluminum Complex	2	500	265/295	515°F/268°C	10°F/-12°C	AW	YES	YES
LUB14598*	*FML-2	Aluminum Complex	2	700	265/290	285°F/141°C	0°F/-18°C	AW	YES	YES

## PRESSURE WASHER CHEMICALS

Excalibur products have transitioned to a new trade name: Swish



### Heavy Duty Citrus Cleaner/Degreaser Concentrate

The powerful degreaser is approved by the CFIA for federally registered food establishments. Its safe formula uses a citrus solvent to dissolve greasy soils and prevent redeposition onto surfaces.

#### PERFORMANCE:

- Powerful and highly concentrated degreaser to penetrate and dissolve the toughest oily, greasy soils
- Emulsifies greasy soils and prevents redeposition on surfaces
- Citrus solvent provides accelerated action for tough jobs
- CFIA approved for food handling applications
- Once soils are removed, there are no malodours, only a clean fresh scent lingers

#### USES:

- Excellent for cleanup of oils, grease, tar, ink, petroleum soils
- Use on most surfaces not harmed by water including tile, concrete, marble, painted surfaces, engines, conveyors, light fixtures, fireplaces, tools
- Dilution ratios: 1:5 for heavy soils; 1:20 for medium soils; 1:40 for light soils
- Can be applied with a microfibre cloth, mop, or pressure washer
- Safe for food establishments and effective on all washable surfaces



#### PROPERTIES CHART



Made in Canada

PART NO.	SIZE	RECOMMENDED MIX RATIO
LUBWP4004	3.78 Liter Jug	1:5 for heavy soils; 1:20 for medium soils; 1:40 for light soils

### Neutral Cleaner

Routine floor cleaning removes soils and prevents dangerous and costly slip-and-fall accidents. This concentrated, no-rinse formula efficiently cleans soils without dulling floor finish.

#### PERFORMANCE:

- Formulated to restore and light clean floors in the neutral pH range
- High-performance cleaner contains no alkaline builders that may dull finish
- Cleans and brightens floors to enhance and restore floor finish
- Efficient, no-rinse formula
- Easily lifts dirt from floors leaving a sparkling shine

#### USES:

- Works great on tile, terrazzo, granite, marble, sheet vinyl, epoxy, and stone floors
- General-purpose floor cleaner for damp mopping, light cleanup, or for use in automatic scrubbers
- Dilute with cold water at 1:40 to 1:100 for heavy to light soils
- Conserves resources by postponing wasteful flooring replacements
- Excellent for daily or weekly maintenance



#### PROPERTIES CHART



Made in Canada

PART NO.	SIZE	RECOMMENDED MIX RATIO
LUBWP4020	18.9 Liter Pail	Dilute with cold water at 1:40 to 1:100 for heavy to light soils

## Vehicle Wash Concentrate

The vehicle wash stands out for its cleaning abilities on all types of vehicles and home surfaces. Dirt and grime are quickly removed from trucks, boats, trailers, bricks, vinyl, and aluminum siding, and softening agents deliver quick-rinse results.

### PERFORMANCE:

- Multi-purpose cleaner that delivers a sparkling shine every time
- Excellent sheeting action that leaves surfaces glistening
- Contains softening agents for easy rinsing
- Concentrated and highly effective economical formula
- Penetrants cut through tough road film, grease, grime, and bug residue

### USES:

- For use on motor vehicles, cars, trucks, boats, houses, trailers, motor homes, and drive-ways
- Cleans aluminum siding, brick, fiberglass, hard plastics, vinyl, concrete, and pavement
- Dilution ratios of 1:40 for heavy soils, 1:100 for light soils
- Can be used with a brush or pressure washer
- Concentration can be reduced with hot water or steam to deliver impeccable results



Made in Canada

### PROPERTIES CHART

PART NO.	SIZE	RECOMMENDED MIX RATIO
LUBWP5104	3.78 Litre Jug	Dilution ratios of 1:40 for heavy soils, 1:100 for light soils
LUBWP5120	18.9 Litre Pail	Dilution ratios of 1:40 for heavy soils, 1:100 for light soils

## Industrial Strength Alkaline Cleaner

Excalibur 5000 is an industrial strength alkaline cleaner concentrate formulated around state of the art cleaning technology. It contains twice the active ingredients of many alkaline cleaners presently being sold thus making it extremely low in cost to use.

Excalibur 5000 incorporates emulsifiers, soil destructive and peptizing agents that synergize the action of the builders to provide rapid, complete oil and dirt breakdown. These oily contaminants are emulsified and dispersed completely so that they do not interfere with rinsing. Built-in water softeners ensure that water hardness in make-up water is tied up and does not remove any cleaning power.

Excalibur 5000 will easily clean most plastic, rubber, porcelain, concrete as well as a variety of metal surfaces without leaving a white residue on the surface after rinsing. It will take on any cleaning chores from light duty to the toughest. It is safe on most surfaces that can be cleaned with water.

Excalibur 5000 offers the following advantages:

- Excalibur 5000 contains no phosphates and is biodegradable - reduces disposal problems.
- Is non-toxic and non-flammable - safe for employees to handle.
- Contains no free hydroxides - will not clog steam cleaning and high pressure hot water machines.
- Rapid penetration.
- Versatile - may be applied by hand, immersion, spray, steam gun, high pressure hot water or scrubber.
- Liquid - easily diluted and totally dissolved, unlike powdered products.



Made in Canada

### PROPERTIES CHART

PART NO.	SIZE	RECOMMENDED MIX RATIO
LUBWP5020	20 Liter Pail	General Cleaning 20 to 1 - 40 to 1





## GREASE GUNS & INJECTORS

### GREASE GUN - LEVER & PISTON GRIP TYPE

- Supplied with 7" detachable metal spout.
- 3 way filling
- 11" body accepts 14 oz. cartridges or can be filled by hand.



PART NO.	DESCRIPTION
LUBG4805	Lever type grease gun
LUBA480N	Piston grip type gun

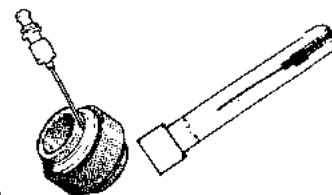
### GREASE GUN COUPLERS



PART NO.	DESCRIPTION
LUB806	1/8" NPT 3 JAW
LUB806HD	Heavy Duty Coupler - 1/8" NPT





### GREASE INJECTORS

- Lubricate sealed bearings - the injector goes under or through seal.
- Prevents dust, moisture, and rust build up, and reduces friction wear.
- Regular servicing of machines and motors will add years to their life.
- The injector tip is thin, flexible, surgical grade stainless steel tapered to get under the seal lip.
- The very fine outer diameter (19 to 20 gauge) of the tip allows insertion into the small relube holes in the outer ring of some sealed bearings.
- Fits standard grease guns giving flexible access to bearings, perfect for those hard to reach spots.

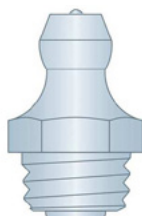


PART NO.
LUB CGI-198

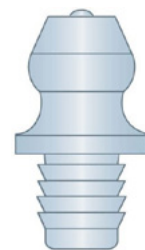
## GREASE FITTINGS

DIAMETER	 STRAIGHT	 45°	 65°	 90°
Thread 1/8" NPT	LUB820	LUB840	LUB860	LUB880
Thread 1/4" NPT	LUB827	LUB845		
Thread 1/4" - 28	LUB821	LUB841	LUB861	LUB881
Thread 1/4" - 26 BSF	LUB822			
Thread 5/16" - 22 BSF	LUB823	LUB843		LUB883
1/4" Drive	LUB826			
5/16" Drive	LUB825			

- Heritage Grease Fitting, Zerk, Straight, M10 x 1.5 Taper Thread, Steel, Zinc Clear Trivalent, DIN 71412,
- Check: Surface Ball, OAL: 18 mm, Shank: 5.5 mm Standard, Drive: 11 mm Hex



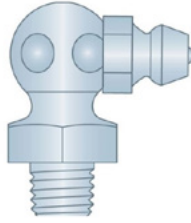
- Heritage Fitting, Drive Type, Straight, 3/16 Drive, Steel, Zinc Clear Trivalent, SAE J534,
- Check: Surface Ball, OAL: 0.52, Shank: 0.25 Long, Drive: 5/16 Dia



PART NO.	DESCRIPTION
LUBH2121Z3	M10X1.5 Cs Z3

PART NO.	DESCRIPTION
LUBH1728Z3	Drive Type 3/16

- Heritage Fitting, Zerk, 90 Angle, 1/4-28 SAE-LT, Taper Thread, Steel, Zinc Clear Trivalent, SAE J534, Check: Surface Ball, OAL: 0.75, Shank: 0.2 Standard, Drive: 3/8 Hex



PART NO.	DESCRIPTION
HAR189014	GF911 1/4-28 90

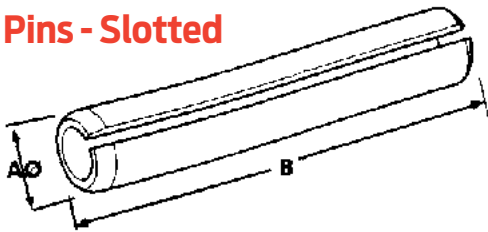
- Heritage Fitting, Zerk, Straight, 1/4-28 UNF, Parallel Thread, Steel, Zinc Clear Trivalent, SAE J534
- Check: Surface Ball, OAL: 0.48, Shank: 0.14 Standard, Drive: 9/32 Hex



PART NO.	DESCRIPTION
LUBH1792	Grease Fitting Str 1/4-28 Shor

## PINS

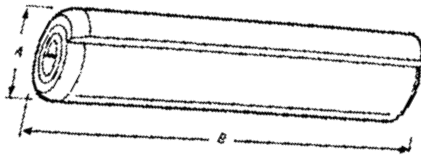
### Roll Pins - Slotted



PARTNO.	A X B
HAR1102	1/16"x1"
HAR1109	1/8"x5/8"
HAR1111	1/8"x1"
HAR1115	3/16"x3/4"
HAR1117	3/16"x1"
HAR1119	3/16"x1 1/2"
HAR1121	3/16"x2"
HAR1126	1/4"x1"
HAR1129	1/4"x1 1/2"
HAR1131	1/4"x1 3/4"
HAR1133	1/4"x2"

PARTNO.	A X B
HAR1136	5/16"x1"
HAR1138	5/16"x1 1/2"
HAR1139	5/16"x1 3/4"
HAR1140	5/16"x2"
HAR1145	3/8"x1 1/2"
HAR1146	3/8"x1 3/4"
HAR1147	3/8"x2"
HAR1160	1/2"x1 1/2"
HAR1161	1/2"x1 3/4"
HAR1162	1/2"x2"

### Roll Pins - Coiled



PART NO.	A X B
HAR2788	1/8"x1"
HAR2789	3/16"x1"
HAR2790	3/16"x2"
HAR2791	1/4"x1"
HAR2792	1/4"x1 1/2"
HAR2793	1/4"x2"
HAR27935	5/16"x1
HAR2794	5/16"x1 1/2"
HAR2795	5/16"x2"

PART NO.	A X B
HAR2796	5/16"x2 3/4"
HAR2797	3/8"x1 1/2"
HAR2798	3/8"x2"
HAR2799	3/8"x3"
HAR2800	7/16"x1 1/2"
HAR2801	7/16"x2"
HAR239-612	7/16"x3 1/4"
HAR2803	1/2"x2"
HAR2804	1/2"x3"

### Roll Pin Assortment - Slotted

#### 36 PIN PACKAGE

Contains:  
a selection of the popular inch and metric sizes.

PART NO.
HAR 2230



#### 62 PIN PACKAGE

Contains:  
1 each of the popular inch sizes.

PART NO.
HAR1171

#### 172 PIN PACKAGE

Contains:

PART NO.
HAR2897

10 - 1/16" x 1"	10 - 1/8" x 5/8"	10 - 1/8" x 1"
10 - 3/16" x 3/4"	10 - 3/16" x 1"	10 - 3/16" x 1 1/2"
10 - 3/16" x 2"	10 - 1/4" x 1"	10 - 1/4" x 1 1/2"
10 - 1/4" x 1 3/4"	10 - 1/4" x 2"	10 - 5/16" x 1"
9 - 5/16" x 1 1/2"	7 - 5/16" x 1 3/4"	6 - 5/16" x 2"
7 - 3/8" x 1 1/2"	7 - 5/8" x 1 3/4"	5 - 3/8" x 2"
5 - 1/2" x 1 1/2"	4 - 1/2" x 1 3/4"	4 - 1/2" x 2"

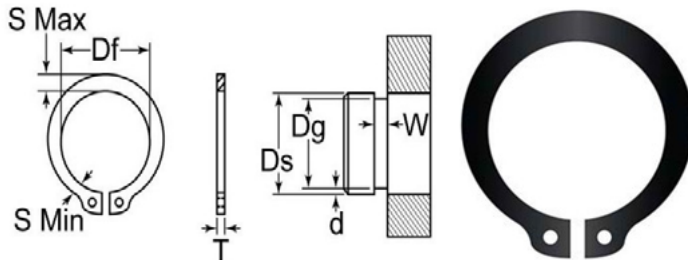
## Spirol Pins



- Standard Duty 1070-1095 Carbon Steel Plain Oiled ASME Slotted spring pins are hollow, cylindrical tube-style press fit fasteners with chamfered ends that are lighter, cheaper, and easier to install than solid pins
- Commonly used as locking devices, positioning points, anti-chafing surfaces, shafts, or sleeves for wiring

PART NO.	C X L
HARSP-156-1000	5/32" x 1"
HARSP-156-1500	5/32" x 1-1/2"
HARSP-250-3000	1/4" x 3"
HARTP-170	1/2 x 4-1/2"
HAR2788	1/8" x 1"
HAR2789	3/16" x 1"
HAR2790	3/16" x 2"
HAR2791	1/4" x 1"
HAR253233	3/8" x 2"
HAR253235	3/8" X 2-1/2"

## Snap Rings



- Rotor Clip Snap Ring Heavy Duty Carbon Spring Steel Phosphate
- Phosphate finish is a thin external layer created by chemical application and can serve as a base for paint or oil, provide corrosion resistance, and reduce friction
- Carbon spring steel is high in strength and is known for its ability to resist deformation under stress
- External snap rings are axially installed in the groove of a shaft with a portion of the ring protruding from the groove that is also called a shoulder and holds an assembly in place

PART NO.	DESCRIPTION
HAR3435137	External 1-3/8"
HAR3435150	External 1-1/2"
HAR2845	Internal 2-7/16"
HAR2888	External 1-9/16"

## Roll Pin Assortment - Coiled



PART NO.
HAR2805

Contains:

10 - 1/8" x 1"    9 - 5/16" x 1 1/2"    5 - 7/16" x 1 1/2"  
 10 - 3/16" x 1"    6 - 5/16" x 2"    5 - 7/16" x 2" (slotted)  
 10 - 3/16" x 2"    5 - 5/16" x 2 3/4"    5 - 7/16" x 3" (slotted)  
 10 - 1/4" x 1"    7 - 3/8" x 1 1/2"    4 - 1/2" x 2"  
 10 - 1/4" x 1 1/2"    5 - 3/8" x 2"    4 - 1/2" x 3"  
 10 - 1/4" x 2"    5 - 3/8" x 3"



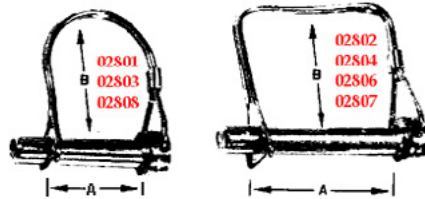
## Lynch pins

- Tough, strong and durable, lynchpins lock quickly and securely, with an easy grip for quick removal.
- Available in sizes 3/16" to 7/16"
- Fit Category 0-3 top link pins and lift arm pins
- Yellow zinc plated for added durability

PART NO.	SIZE	USABLE LENGTH	SHANK LENGTH	OVERALL LENGTH	WEIGHT (LBS)
HAR16790P	7/16"	1-1/2"	1-3/4"	2"	0.11
HAR16791P	1/4"	1-7/16"	1-3/4"	2-1/8"	0.05
HAR252100	3/16"	1-1/4"	1.25"	1"	0.026

## Lock Pins

Popular quick connect and disconnect pins find many uses on equipment and shafts up to 2 1/2" in diameter. The retainer wire is formed of tempered M-B spring wire and coldheaded shank is of 1010 carbon steel. Entire assembly is zinc plated. Two styles, round lock wire or square lock wire.



Round

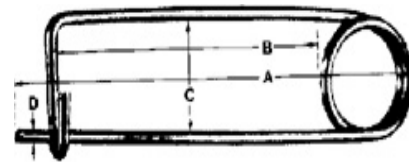
PART NO.	SIZE	USABLE LENGTH(A)	CLEAR-ANCE (B)	WEIGHT PER 100
HAR02801	1/4" x 2"	1 3/4"	1 1/2"	6.5
HAR02803	3/8" x 1 3/8"	1 1/2"	1 1/2"	9.31
HAR02808	5/16" x 2"	1 3/4"	1 1/2"	8.84

Square

PART NO.	SIZE	USABLE LENGTH(A)	CLEARANCE (B)	WEIGHT PER 100
HAR02802	5/16" x 2 3/4"	2 1/2"	1 5/8"	12.31
HAR02804	3/8" x 2 1/2"	2 1/4"	1 1/2"	12.5
HAR02806	3/8" x 2 3/4"	2 1/2"	1 5/8"	13.75
HAR02807	1/4" x 2 3/4"	2 1/2"	1 3/4"	9.2

## Safety Pins

Positive locking pin for retaining Clevis Pin is made from hard-drawn M-B plated spring wire.



PART NO.	LENGTH			WIRE DIA. (D)	WEIGHT PER 100
	(A)	(B)	(C)		
HAR2505	2 3/4"	1 11/16"	5/8"	0.091	1.75
HAR2506	4 3/8"	2 13/16"	13/16"	0.12	4.25
HAR2507	5 3/4"	3 3/4"	1 1/8"	0.148	9.13

Dimensions are nominal - for reference only.

Safety Pins have many uses on farm equipment, trucks, and industrial equipment where safety is important.

## Safety Snap Pins

- Connect with quality! Rugged, durable Double HH wirelock pins get the job done on farm equipment, trailers, couplers and more.
- Shaft diameters from 1/4" to 3/8"
- Round or square wirelock
- Yellow zinc plated for added durability

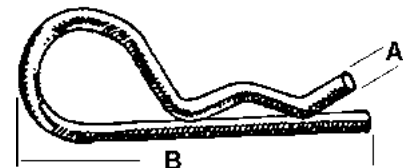


PART NO.	SIZE	USABLE LENGTH	SHANK LENGTH	OVERALL LENGTH	WIRE
HAR252010	3/8 "	1-1/2"	1-3/4"	2"	Round
HAR252020	3/8 "	2-1/4 "	2-1/2 "	2-3/4 "	Square

## Hair Pins

### BULK

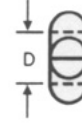
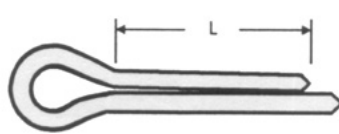
PART NO.	A	B	TO FIT PIN DIA.
HAR4401	5/64" (2 mm)	1 5/8" (42 Mm)	1/4" - 7/16" (7 mm - 10 mm)
HAR4404	1/8" (3 mm)	2 1/2" (65 mm)	3/8" - 11/16" (9 mm - 18 mm)
HAR4408	5/32" (4 mm)	3" (78 mm)	1/2" - 7/8" (12 mm - 26 mm)
HAR4405	13/64" (5 mm)	4" (104 mm)	5/8" - 1 1/16" (15 mm - 30 mm)
HAR4403	1/4" (6 mm)	4 1/2" (117 mm)	3/4" - 1 1/4" (18 mm - 32mm)





## Cotter Pins - Bulk

- Precision made to provide fast, easy installation.
- Easy to insert, lock, remove and re-use.
- A blow with a hammer locks the pin in place.
- Sold in Packages of 100.



PART NO.	DESCRIPTION (D X L)
HAR1516	1/16" X 1 1/2" (2 X 38 mm)
HAR1495	3/32" x 3/4" (2.5 x 18.75 mm)
HAR1496	3/32" x 1" (2.5 x 25 mm)
HAR1497	3/32" x 1 1/2" (2.5 x 38 mm)
HAR1498	1/8" x 1" (3 x 25 mm)

PART NO.	DESCRIPTION (D X L)
HAR1499	1/8" X 1 1/4" (3 X 32 mm)
HAR1500CP	1/8" x 1 1/2" (3 x 38 mm)
HAR1501	5/32" x 1 1/2" (4.5 x 38 mm)
HAR1512	3/16" x 1" (5 x 25 mm)
HAR1502	3/16" x 1 1/2" (5 x 38 mm)
HAR244076	3/16" x 1" (5 x 25 mm)

PART NO.	DESCRIPTION (D X L)
HAR1506	1/4" x 2" (6 x 50 mm)
HAR1507	1/4" x 3" (6 x 75 mm)
HAR1510	5/16" x 3" (8 x 75 mm)

## Cotter Pin Packages



PART NO.
HAR 2220



PART NO.
HAR 3893



PART NO.
HAR 2995



PART NO.
HARCP100K

Assortment contains 50 cotter pins of the following sizes:

PART NO.	DESCRIPTION
10	1/16" x 1 1/2"
8	3/32" x 1 1/2"
10	1/8" x 1 1/2"
8	5/32" x 1 1/2"
6	3/16" x 2"
4	1/4" x 3"
4	5/16" x 3"

Assortment contains 55 cotter pins of the following sizes:

PART NO.	DESCRIPTION
10	1/16" x 1 1/2"
10	3/32" x 3/4"
5	3/32" x 1 1/2"
10	5/32" x 1 1/2"
5	3/16" x 2"
10	1/8" x 1"
5	1/8" x 1 1/2"

Assortment contains 290 cotter pins of the following sizes:

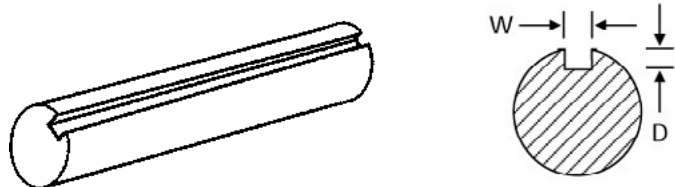
PART NO.	DESCRIPTION
50	1/16" x 1 1/2"
50	3/32" x 1"
50	3/32" x 1 1/2"
50	1/8" x 1"
50	1/8" x 1 1/2"
20	3/16" x 2"
10	1/4" x 2"
5	1/4" x 3"
5	5/16" x 3"

Cotter Pin Assortment Carbon Steel Zinc Clear 100 Piece

- Cotter pin assortments are a collection of common cotter pins in an organized container
- Divided box is great for keeping parts organized

## SHAFTING AND KEY STOCK

### Keyed Shafting



36" long keyed shafting is manufactured from high quality 1018 cold drawn material with close tolerances of  $+.000 - .002$ .

Standard keyways are cut the full length of each bar and are in accordance with the Machinery Handbook (ANSI B17.1 - 1967, R1989) standards. Width:  $+.002 - .000$  Depth:  $+.016 - .000$

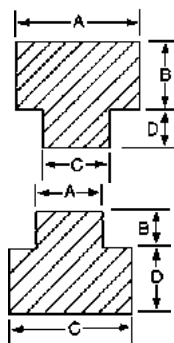
- Full-length, standard size keyways allow for quick replacement
- Eliminate the need for additional machining - just cut to length
- Keep popular sizes on hand for emergency situations

PART NO.	SHAFT DIAMETER	KEYWAY (W X D)	WEIGHT/ FOOT
HAR09100	1/2"	1/8" x 1/16"	0.67
HAR09101	5/8"	3/16" x 3/32"	1.04
HAR09103	3/4"	3/16" x 3/32"	1.5
HAR09105	7/8"	3/16" x 3/32"	2.04
HAR09107	1"	1/4" x 1/8"	2.67
HAR09108	1 1/8"	1/4" x 1/8"	3.38
HAR09109	1 3/16"	1/4" x 1/8"	3.77
HAR09110	1 1/4"	1/4" x 1/8"	4.17
HAR09113	1 3/8"	5/16" x 5/32"	5.05
HAR09115	1 1/2"	3/8" x 3/16"	5.89

### Mak-A-Key Step Key Stock

Use for couplings, gears, sheaves, sprockets, pulleys - anything that keys to a shaft, if the keyway is a different size than the keyway in the shaft. Available in 12" lengths. Material 1018. Cold finished. Oversize keystock ground down to A, B-D & C dimensions per tolerances listed at right.

PART NO.	TYPE	DIMENSIONS				WEIGHT LBS/BAR
		A	B	C	D	
HAR31001	1	3/16"	3/32"	1/8"	1/16"	.088
HAR31003	2	3/16"	3/32"	1/4"	1/8"	.166
HAR31004	2	1/4"	1/8"	5/16"	1/8"	.241
HAR31006	2	1/4"	1/8"	3/8"	3/16"	.347
HAR31008	1	3/8"	3/16"	5/16"	5/32"	.406
HAR31011	2	3/8"	3/16"	1/2"	1/4"	.680
HAR31015	2	1/2"	1/4"	5/8"	5/16"	1.090



Tolerances: Type 1

A & C dimensions  $-.000/+.002$

B/D dimensions  $-.003/+.003$

B & D dimensions  $-.004/+.004$

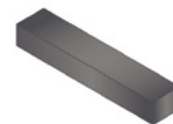
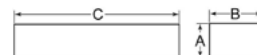
Tolerances: Type 2

C & A dimensions  $-.000/+.002$

B/D dimensions  $-.005/+.005$

B & D dimensions  $-.005/+.005$

PART NO.	A	B	C	MATERIAL	WEIGHT (LBS)
HAR3010001125-12	1"	1.125"	12	Carbon Steel Plain	3.827



## Step Key Assortment

Seven pieces of the most frequently asked-for sizes. 12" long. Packed in handy toolbox-sized carton.



PART NO.
HAR31090

Each carton includes one each of the following:

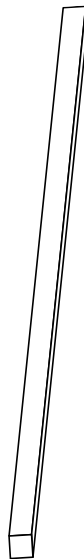
INCLUDES	
HAR31001	HAR31004
HAR31003	HAR31011
HAR31006	
HAR31015	
HAR31008	

## Key Stock - Bulk

Keystock comes in 12" lengths and is zincplated. Available in square, rectangular and step. Simply cut to the desired length.

### SQUARE KEYSTOCK PLATED

PARTNO.	DESCRIPTION
HAR08-01	1/8" X 1/8" X 12"
HAR08-03	3/16" X 3/16" X 12"
HAR08-06	1/4" X 1/4" X 12"
HAR08-09	5/16" X 5/16" X 12"
HAR08-13	3/8" X 3/8" X 12"
HAR08-17	7/16" X 7/16" X 12"
HAR08-22	1/2" X 1/2" X 12"
HAR08-23	9/16" X 9/16" X 12"
HAR08-27	5/8" X 5/8" X 12"
HAR08-28	3/4" X 3/4" X 12"
HAR08-31	7/8" X 7/8" X 12"
HAR08-29	1" X 1" X 12"



### RECTANGULAR KEYSTOCK PLATED

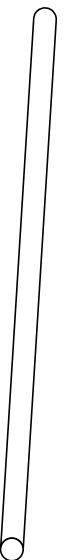
PARTNO.	DESCRIPTION
HAR08-02	3/16" X 1/8" X 12"
HAR08-04	1/4" X 1/8" X 12"
HAR08-05	1/4" X 3/16" X 12"
HAR08-07	5/16" X 3/16" X 12"
HAR08-10	3/8" X 3/16" X 12"
HAR08-08	5/16" X 1/4" X 12"
HAR08-11	3/8" X 1/4" X 12"
HAR08-14	7/16" X 1/4" X 12"
HAR08-18	1/2" X 1/4" X 12"
HAR08-12	3/8" X 5/16" X 12"
HAR08-19	1/2" X 5/16" X 12"
HAR08-20	1/2" X 3/8" X 12"
HAR08-21	1/2" X 7/16" X 12"



### ROUND KEYSTOCK/ PINSTOCK

Round steel pins in handy 12" lengths have 1001 uses around the farm, machine shop and industrial plant. Zinc plated with size printed on each pin. All pins can be bent cold 180 degrees. Will rivet, can be threaded with a die or lathe, can be welded without embrittlement or hardening.

PARTNO.	DESCRIPTION
HAR09-02	3/16" X 12"
HAR09-04	5/16" X 12"
HAR09-06	7/16" X 12"
HAR09-07	1/2" X 12"

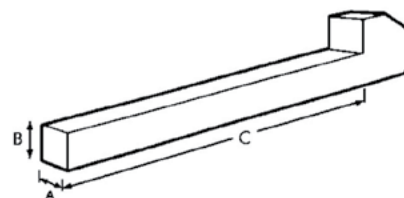


## Gib Head Keys

Gib head keys are used for holding pulleys and gears tightly on the shaft. They are tapered 1/8" per foot.

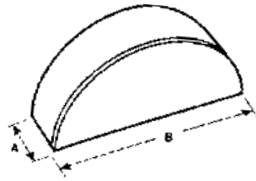
### BULK GIB HEAD KEYS

PART NO.	A	B	C
HAR3692	1/4"	1/4"	2 1/2"
HAR3693	5/16"	1/4"	2 1/2"
HAR3694	5/16"	5/16"	3"
HAR3696	3/8"	3/8"	3"
HAR3698	1/2"	1/2"	3 1/2"



## Woodruff Keys/Half Moon Keys

### BULK WOODRUFF/ HALF MOON KEYS



PARTNO.	DESCRIPTION
HAR2904	3/32" X 1/2"
HAR2906	1/8" X 5/8"
HAR2908	5/32" X 3/4"
HAR2909	5/32" X 7/8"
HAR2910	3/16" X 5/8"
HAR2911	3/16" X 3/4"
HAR2912	3/16" X 7/8"
HAR2913	3/16" X 1"
HAR2914	1/4" X 3/4"

PARTNO.	DESCRIPTION
HAR2915	1/4" X 7/8"
HAR2916	1/4" X 1"
HAR2917	1/4" X 1 1/8"
HAR2918	1/4" X 1 1/4"
HAR2919	1/4" X 1 1/2"
HAR2920	5/16" X 1"
HAR2921	5/16" X 1 1/8"
HAR2922	5/16" X 1 1/4"
HAR2923	3/8" X 1 1/4"
HAR2924	3/8" X 1 3/8"

Check for price and availability on other sizes not listed.

## Retaining Rings

Many other sizes and styles of retaining rings are available.  
Call for price and availability.

### INTERNAL CIRCLIPS (N1300, N1500)

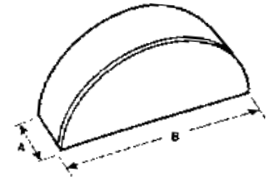
Order in multiples of 10



PART NO.	Ø (INCHES)	Ø (MM)
HAR2818	3/4	19
HAR2822	1	25
HAR2824	1 1/8	29
HAR2825	1 3/16	30
HAR2826	1 1/4	32
HAR2828	1 3/8	35
HAR2830	1 1/2	38
HAR2833	1 11/16	42
HAR2834	1 3/4	44
HAR2835	1 13/16	46
HAR2836	1 7/8	47
HAR2838	2	50

### WOODRUFF KEY/ HALF MOON KEY ASSORTMENT

PART NO.
HAR 2925



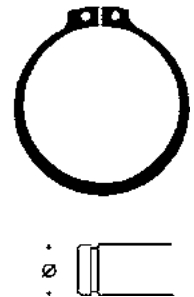
Contains:

10 of 3/32" x 1/2"  
10 of 1/8" x 1/2"  
10 of 1/8" x 5/8"  
10 of 1/8" x 3/4"  
10 of 5/32" x 3/4"  
10 of 5/32" x 7/8"  
10 of 3/16" x 5/8"  
10 of 3/16" x 3/4"  
10 of 3/16" x 7/8"  
10 of 3/16" x 1"

10 of 1/4" x 3/4"  
10 of 1/4" x 7/8"  
10 of 1/4" x 1"  
10 of 1/4" x 1 1/8"  
5 of 1/4" x 1 1/4"  
4 of 1/4" x 1 1/2"  
10 of 5/16" x 1"  
10 of 5/16" x 1 1/8"  
5 of 5/16" x 1 1/4"  
5 of 3/8" x 1 1/4"  
5 of 3/8" x 1 3/8"

### EXTERNAL CIRCLIPS (N1400, N5100)

Order in multiples of 10



PART NO.	Ø (INCHES)	Ø (MM)
HAR2871	1/2	12
HAR2873	5/8	16
HAR2875	3/4	19
HAR2876	13/16	-
HAR2877	7/8	22
HAR2879	1	25
HAR2880	1 1/16	-
HAR2881	1 1/8	29
HAR2883	1 1/4	32
HAR2884	1 5/16	-
HAR2885	1 3/8	35
HAR2886	1 7/16	-
HAR2887	1 1/2	38
HAR2891	1 3/4	-
HAR2892	1 13/16	-
HAR2895	2	-



## WIRE ROPE & ACCESSORIES

### Galvanized Aircraft Cable



NOTE: Wire rope is priced by the foot and must be purchased by the full reel.

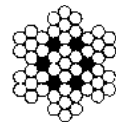
#### Galvanized Commercial Quality Aircraft Cable

These aircraft cables are manufactured with 7 strands and a galvanized finish giving improved flexibility, strength and resistance to corrosion. These versatile cables are used in a variety of applications such as winches, hoists, hand rails, mine signal cords, truck tie downs and various other small cable applications.

#### Round Strand General Purpose Cable

These ropes feature 6 strands (25 wires per strand) closed around a fibre core. This class of rope is used on a greater variety of applications than any other. Such ropes will be found on bridge cranes and gantrys, shop cranes and mobile cranes, hoists and derricks, dredges and clam shells, drag lines and scrapers, power shovels and trench hoes, blast-holes drills, and in general industry.

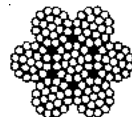
PART NO.	DIA.	TYPE	BREAKING STRENGTH	AVAILABLE LENGTH
HAR1/16-7X7	1/16"	7 x 7 Galvanized Aircraft Cable	480 lbs.	500 ft.
HAR3/32-7X7	3/32"	7 x 7 Galvanized Aircraft Cable	920 lbs.	500 ft.
HAR1/8-7X19	1/8"	7 x 19 Galvanized Aircraft Cable	2,000 lbs.	500 ft.
HAR5/32-7X19	5/32"	7 x 19 Galvanized Aircraft Cable	2,800 lbs.	500 ft.
HAR3/16-7X19	3/16"	7 x 19 Galvanized Aircraft Cable	4,200 lbs.	500 ft.
HAR1/4-7X19	1/4"	7 x 19 Galvanized Aircraft Cable	7,000 lbs.	500 ft.
HAR5/16-7X19	5/16"	7 x 19 Galvanized Aircraft Cable	9,800 lbs.	500 ft.
HAR3/8-7X19	3/8"	7 x 19 Galvanized Aircraft Cable	14,400 lbs.	500 ft.
HAR1/2-6X25	1/2"	6 x 19 Round Strand General Purpose Cable	20,700 lbs.	500 ft.
HAR1/16-7X7-3000	1/16"	7 x 7 Galvanized Aircraft Cable	480 lbs.	3000 ft.
HAR3/32-7X7-1000	3/32"	7 x 7 Galvanized Aircraft Cable	-	1000 ft.
HAR1/16-7X7-5000	1/16"	7 x 7 Galvanized Aircraft Cable	-	5000 ft.



7 x 7



6 x 19



7 x 19

### Cable Thimbles

PART NO.	FOR CABLE DIAMETER
HART1/8	1/8"
HART3/16	3/16"
HART1/4	1/4"
HART5/16	5/16"
HART3/8	3/8"
HART1/2	1/2"
HART5/8	5/8"



### Cable Clamps

PART NO.	FOR CABLE DIAMETER
HARC1/8	3/32" - 1/8"
HARC3/16	3/16"
HARC1/4	1/4"
HARC5/16	5/16"
HARC3/8	3/8"
HARC1/2	1/2"
HARC5/8	5/8"
HARC3/4	3/4"



## TRAILER ACCESSORIES

### D-Shackles - Screw Type Pin Utility Clevis

- Commercial Type
- Zinc plated, Mild steel
- Supplied untested

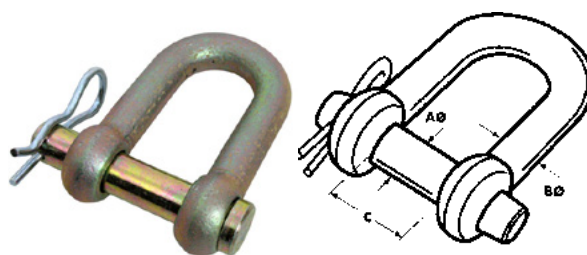
PART NO.	A	B	C	SAFE WORKING LOAD LIMIT	ULTIMATE LOAD LIMIT
HAR2768	13 mm (1/2")	13 mm (1/2")	26 mm (1")	1,000 lbs.	5,000 lbs.



### D-Shackles - Loose Pin Utility Clevis

- Commercial Type
- Zinc plated, Mild steel
- Supplied untested

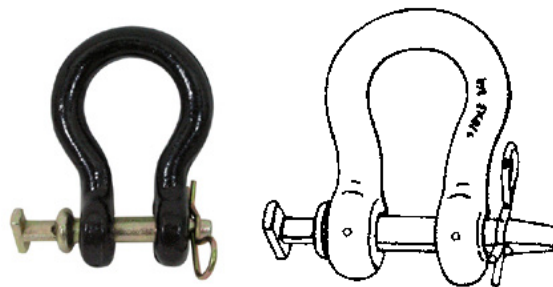
PART NO.	A	B	C
HAR1400	19 mm	19 mm (3/4")	49 mm (2")



### Farm Straight Clevis

- Black powder coated finish
- Zinc plated pin & clip

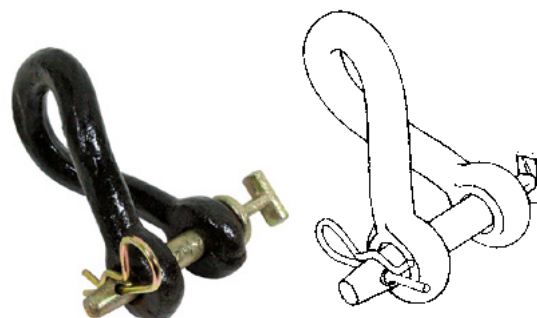
PART NO.	PIN DIA.	BODY SIZE	MAX. WWL
HAR66029	6 mm	5/8" x 3 1/4"	6,000 lbs.
HAR66030	8 mm	3/4" x 3 3/4"	12,000 lbs.
HAR66031	8 mm	7/8" x 4 1/4"	16,000 lbs.
HAR66032	10 mm	15/16" x 4 5/8"	20,000 lbs.
HAR66033	11 mm	1" x 5 5/16"	25,000 lbs.



### Farm Twisted Clevis

- Black powder coated finish
- Zinc plated pin & clip

PART NO.	PIN DIA.	BODY SIZE	MAX. WWL
HAR30258	1/2"	5/8" x 3"	6,000 lbs.
HAR30234	5/8"	3/4" x 3 1/2"	12,000 lbs.
HAR30287	3/4"	7/8" x 3 7/8"	16,000 lbs.
HAR30290	7/8"	15/16" x 4 1/4"	20,000 lbs.
HAR30295	1"	1" x 5 5/16"	25,000 lbs.



## Bow Shackles - Farm Screw Pin Clevis

- Black powder coated finish
- Zinc plated pin

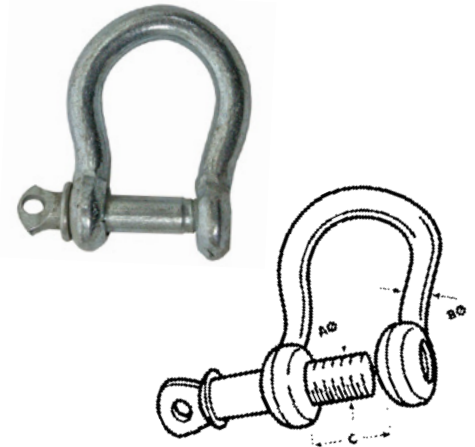
PART NO.	BODY DIA. & LENGTH	PIN SIZE	SAFE WORKING LOAD LIMIT	ULTIMATE LOAD LIMIT
HAR66000	1/4" x 1 1/8"	5/16"	1,000	5,000
HAR66001	5/16" x 1 1/4"	3/8"	1,500	7,500
HAR66003	7/16" x 1 11/16"	1/2"	3,000	15,000
HAR66004	1/2" x 1 15/16"	5/8"	4,000	20,000
HAR66005	5/8" x 2 1/2"	3/4"	6,500	32,500
HAR66006	3/4" x 3"	7/8"	9,500	47,500
HAR66007	7/8" x 3 1/4"	1"	13,000	65,000
HAR66008	1" x 3 3/4"	1 1/8"	17,000	85,000



## Bow Shackles - Threaded Farm Clevis

- Commercial Type
- Galvanized Mild Steel
- Supplied Untested

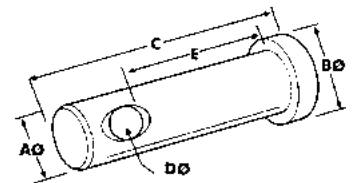
PART NO.	A	B	C
HAR4868	8 mm	8 mm (5/16")	14 mm
HAR4870	11 mm	11 mm (7/16")	21 mm
HAR4872	16 mm	16 mm (5/8")	33 mm
HAR4873	19 mm	19 mm (3/4")	40 mm
HAR4874	22 mm	22 mm (7/8")	45 mm
HAR4875	25 mm	25 mm (1")	51 mm



## Clevis Pins - Bulk

Clevis pins are used as a quick and secure fastener in place of bolts and rivets.

PART NO.	A	B	C	D	E
HAR1468	9 mm (3/8")	12 mm (1/2")	37 mm (1 7/16")	3 mm (1/8")	28 mm (1 3/32")
HAR1442	9 mm (3/8")	12 mm (1/2")	47 mm (1 7/8")	3 mm (1/8")	39 mm (1 17/32")
HAR1448	11 mm (7/16")	14 mm (9/16")	43 mm (1 11/16")	3 mm (1/8")	33 mm (1 5/16")
HAR1443	11 mm (7/16")	14 mm (9/16")	55 mm (2 1/8")	3 mm (1/8")	45 mm (1 25/32")



Other sizes of clevis pins are available, please call with your requirements.

## Clevis Pin Assortment

- Zinc Plated

Contains:

10 of 1/4" x 1 1/32"	10 of 3/8" x 1 17/32"
10 of 5/16" x 29/32"	10 of 7/16" x 1 5/16"
10 of 5/16" x 1 9/32"	10 of 7/16" x 1 25/32"
10 of 3/8" x 3/32"	10 of 1/2" x 2 1/32"

PART NO.
HAR3425



## Clevis Slip Hooks

Clevis Slip Hooks With Latch are durable and secure hooks commonly used in industrial, agricultural, and automotive after-market applications. The latch provides extra safety and prevents accidental release of the chain or wire rope.

PART NO.	DESCRIPTION
HAR66072	C/W Latch 3/8" - Carbon
HAR66076	C/W Latch 1/2" - Alloy

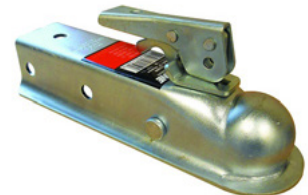


PART NO.	DESCRIPTION
HAR66082	Alloy Grab Hook W Latch 3/8"

## Trailer Coupler

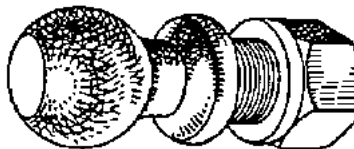
The Trailer Coupler 2 x 2 with 2" Ball and 2" Channel is designed to be mounted onto a 2" trailer hitch ball. It is made to fit a 2" channel and is suitable for towing small and medium-sized trailers.

PART NO.	WEIGHT CAP.
HAR3302	3,500 lb.



## Trailer Hitch Balls

- Grain structure forms continuous pattern through ball and shank.
- Flat area under flange provides strong, stable mounting.
- Radius recess allows hitch ball to be seated securely even though there may be burrs around the hole in the hitch.
- One piece ball and shank means the ultimate in strength.
- Accurate threads provide secure and safe fastening of the ball to the hitch.
- Bright plated finish.



### EXTERNAL THREAD

PART NO.	SIZE	LOAD RATING
HAR3302	2" x 3/4"	3,500 lb.
HAR3303	2" x 1"	5,000 lb.
HAR3304	2 5/16" x 1"	5,000 lb.



## Hitches

- ISO Ring Style Hitch
- European Standards
- Material: Ductile Iron 80-55-6
- Perfect Hitch Option allows a tight, flexible tractor implement connection.



Made in Canada



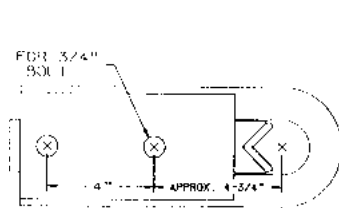
Base Hitch



Base Hitch  
with Clevis



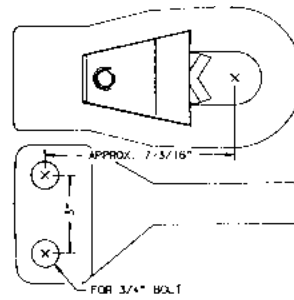
Base with  
Perfect Hitch



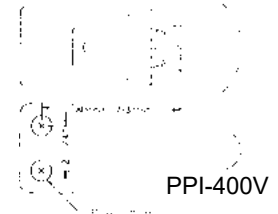
PPI-200H



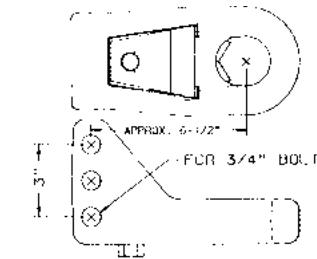
PPI-200V



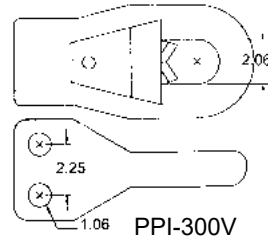
PPI-331VHA



PPI-400V



PPI-237V



PPI-300V



PPI-421V3

	CATEGORY 2	CATEGORY 2	CATEGORY 3	CATEGORY 3	CATEGORY 4
ISO Tractor Drawbar Category	65-125HP	65-125HP	110-250HP	110-250HP	200-470HP
Mounting	Vertical	Vertical	Vertical	Vertical	Vertical
Use For	Hay& Forage	Hay& Forage	Light Tillage	Tillage	HeavyTillage
Maximum Drawpin Size for 40° of Articulation	1 1/2"	1 1/2"	1 1/2"	2"	2"
Maximum Load	169,535	169,535	301,389	301,389	423,378
Base Hitch Part Number	HARPPI-237VR	-	-	HARPPI-331VH	HARPPI-401VH
Base Hitch with Perfect Hitch Part Number	HARPPI-237V	-	-	HARPPI-331VHA	HARPPI-400V
Replacement Top Plate Part Number	HARPPI-202V	HARPPI-202V	HARPPI-302V	HARPPI-302V	HARPPI-302V
Replacement V-Block Part Number	HARPPI-203VR	HARPPI-203VR	HARPPI-203VR	HARPPI-203VR	HARPPI-203VR
Replacement Angle Plate Part Number	-	-	-	-	-
Replacement Cushion Part Number	HARPPI-205H	HARPPI-205H	HARPPI-205H	HARPPI-205H	HARPPI-205H
Bolt Part Number	-	-	-	-	-
Base Hitch with Clevis Part Number	-	-	-	HARPPI-331VHC	-
Replacement Clevis Part Number	HARPPI-206V	HARPPI-206V	HARPPI-206V	HARPPI-206V	-

## Base Hitch

- Vertical mounting hitch
- Vertical load 1000 lbf
- Draft load 29,000 lbf
- Maximum drawpin size 1.5" for 40° of roll & pitch articulation
- Up to 64 HP



PART NO.	CATEGORY
HARCTD126VR	1

- Vertical load 4,000 lbf
- Draft load 56,000 lbf
- Maximum drawpin size 1.5" for 40° of roll & pitch articulation
- Up to 154 HP



PART NO.	CATEGORY
HARCTD201XL	2

- Austempered hitch
- Vertical mounting hitch
- Vertical load 7,200 lbs.
- Draft load 87,000 lbs.
- Maximum drawpin size 1.5" for 40° of roll & pitch articulation
- Up to 248 HP



PART NO.	CATEGORY
HARCTD30XL	3

- Austempered hitch
- Vertical mounting hitch
- Vertical load 12,000 lbf
- Draft load 130,000 lbf
- Maximum drawpin size 2.75" for 30° of roll & pitch articulation
- Up to 670 HP



PART NO.	CATEGORY
HARCTD53XL	5

- Austempered hitch
- Vertical mounting hitch
- Vertical load 8,000 lbf
- Draft load 91,000 lbf
- Maximum drawpin size 1.5" for 40° of roll & pitch articulation
- Up to 248 HP



PART NO.	CATEGORY
HARPP33XL	3

- Austempered hitch
- Vertical mounting hitch
- Vertical load 9,500 lbf
- Draft load 112,000 lbf
- Maximum drawpin size 2.0" for 30° of roll & pitch articulation
- Up to 402 HP



PART NO.	CATEGORY
HARCTD42XL	4

## Perfect Hitch Option

- CTD302V (Top Plate)
- CTD203VR (V-Block)
- CTD205H (Neoprene Cushions)
- WB83 (Grade 5 Bolt)



PART NO.	CATEGORY
HARPP40XL	3

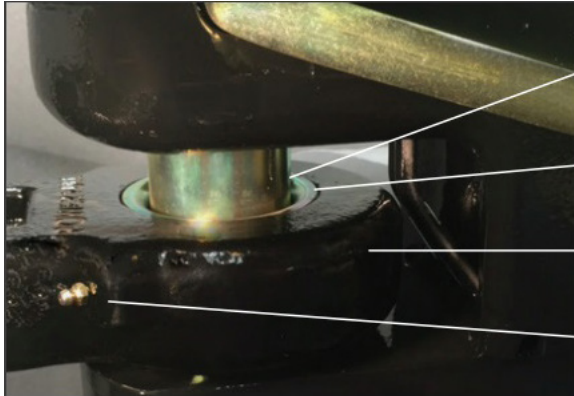
## Hitch Bracket

PART NO.	CATEGORY
HARHB237	4 hole (NRS)
HARHB304	4 hole (NRS)
HARHB305	5 hole (NRS)

## Clevis

PART NO.	DESCRIPTION
HARPP1-208VR	Slotted Clevis W/Nut-Bolt - Un 1.25" x 1.75" slotted hole

## Ab Hitches

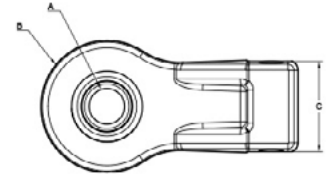
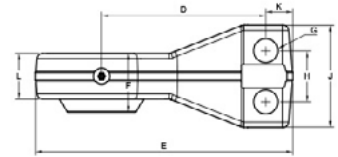
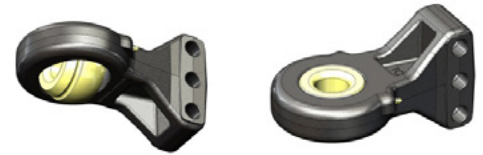


Huge contact area dramatically reduces draw pin and implement ring hitch wear

Tapered spherical bushing makes for easier hook up

The design of the AB Hitch allows for 45 degrees of articulation

Grease zerts are protected at the back of the AB Hitch



CAT	PART NO.	A	B	C	D	E	F	G	H	NO OF BOLTS IN RECEIVER	J	K	L	WEIGHT (LBS)
5	HARBH5SABSA	2"	7.25"	3.96"	7.57"	11.20"	2.75"	1"	2.25"	3	6.75"	1.18"	2.38"	42.8
5	HARBH5SABA	2.75"	7.25"	3.96"	7.57"	11.20"	2.88"	1"	2.25"	3	6.75"	1.18"	2.38"	41.8
4	HARBH4SAB3HA	2"	5.62"	3.96"	7"	9.82"	2.53"	1"	2.25"	3	6.75"	1.18"	2.06"	31
3	HARBH3SABA	1.5"	5.62"	3.96"	6.91"	9.72"	2.53"	1"	2.25"	2	4.5"	1.18"	1.94"	25.5
3	HARBH3SABSA	1.25"	5.62"	3.96"	6.91"	9.72"	2.53"	1"	2.25"	2	4.5"	1.18"	1.94"	25.5
3	HARBH3SAB3HA	1.5"	5.62"	3.96"	6.32"	9.12"	2.53"	.77"	1.5"	3	4.5"	.87"	1.88"	22.8
4	HARBH4SAB3HA	2"	5.62"	3.96"	7"	9.82"	2.66"	1"	2.25"	3	6.75"	1.18"	2.06"	31
4	HARBH4SAB3HSA	1.5"	5.62"	3.96"	7"	9.82"	2.53"	1"	2.25"	3	6.75"	1.18"	2.06"	31
4	HARBH4SABA	2"	5.8"	3.96"	6.92"	10.07"	2.66"	1"	2.25"	2	4.5"	1.18"	2"	27
2	HARBPf-CAT3	1-1/4"	5-1/2"	4"	7-1/2"	11"	2-3/4"	1"	2-1/4"	2	4-1/2"	1-1/4"	2"	31
3&4	HARBPf-CAT4	1-1/2"	5-1/2"	4"	7-1/2"	11"	2-3/4"	1"	2-1/4"	2	4-1/2"	1-1/4"	2"	31
3&4	HARBPf-CAT4Z	1-1/2"	6-3/8"	4"	7-1/2"	11-3/8"	2-3/4"	1"	2-1/4"	3	6-3/4"	1-1/8"	2"	39
3&4	HARBPf-CAT4BW	1-1/2"	5-1/2"	4"	7-1/4"	11"	2-3/4"	1"	3"	2	4-1/2"	1-1/4"	2"	31
5	HARBPf-CAT5	2-3/4"	6-5/8"	6"	7-3/8"	12"	3-3/8"	1"	2"	3	6-3/4"	1-1/4"	2-3/8"	45

## Flanged Bushings

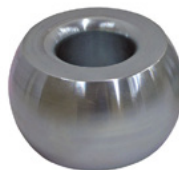
- Step-down flange makes it easy to adapt to smaller drawpins insuring a tight connection.

PART NO.	DESCRIPTION	
HARHM35F	Flanged Bushing Cat 3 & 4	1.50" ID & 2.00" OD
HARHM34F	Flanged Bushing Cat 5.	2.0" ID



## Replacement Bushings

- Tapered spherical bushing makes for easier hook up



Step-down flange makes it easy to adapt to smaller drawpins insuring a tight connection

PART NO.	DESCRIPTION	
HARHM42B	Spherical Bushing Cat. 5	2.00" ID
HARHM32B	Spherical Bushing Cat. 3 & 4	1.50" ID
HARHM31B	Spherical Bushing Cat. 3 & 4	2.00" ID



## Agricultural Jacks

- Ideal for use with ag, industrial, commercial, recreational and many other types of trailers.
- Bracket models available with a durable black powder coat outer tube and with a durable zinc finish inner tube or with a durable clear zinc finish outer and inner tubes.
- Bracket mount and pipe mount top wind models come standard with a comfortable red claw knob on a clear zinc solid bar handle that can be folded away when not in use.
- All bracket mount models have a deep seated snap ring for side load support and also include a raw weld on bracket.
- All pipe mount models include a pin and lanyard assembly as well as a 2" raw male mating pipe.
- All bracket mount and pipe mount models come standard with a grease zerk for easy greasing of jack.
- All bracket mount and pipe mount models come standard with a welded on 3-3/4" x 7-1/2" durable zinc finish sand foot.

**STRONG & RELIABLE**  
**RAM**



### Top Wind - Ring Mount

PART NO.	LIFT	LIFT RATING	PULL PIN SIZE
JACSLR10-TW	10"	3,000 lb.	9/16"
JACSLR15-TW	15"	3,000 lb.	9/16"

### Side Wind - Ring Mount

PART NO.	LIFT	LIFT RATING	PULL PIN SIZE
JACSLR10-SW	10"	3,000 lb.	5/8"
JACSLR15-SW	15"	3,000 lb.	5/8"

### Parts for RAM Jacks

PART NO.	DESCRIPTION	FITS SLR-SW	FITS SLR-TW	FITS SLF-SW	FITS SLF-TW
JAC280002-17	2" OD Internal Mount Tube 9/16" Pin		✓		✓
JACTJP-IP58	2" OD Internal Mount Tube 5/8" Pin	✓		✓	
JACTJP-PN916	9/16" Pin w/chain		✓		✓

## Heavy Duty Jacks



JAC 7015TW-DLIMP



JAC 7015SW-DLIMP

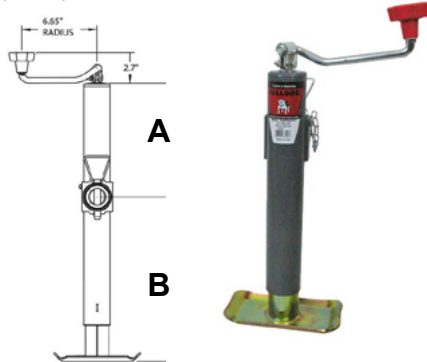


JAC 12015SW-DLIMP

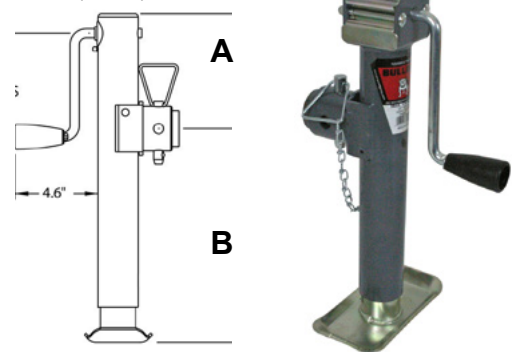
PART NO.	DESCRIPTION	MAX WEIGHT	LIFT
JAC7015TW-DLIMP	Jack, HD Square Tubing, with Telescoping Leg, Top Wind	7,000 lbs.	26" Lift
JAC7015SW-DLIMP	Jack, HD Square Tubing, with Telescoping Leg, Side Wind	7,000 lbs.	26" Lift
JAC12015SW-DLIMP	Jack, Side Wind with Telescoping Leg	12,000 lbs.	26" Lift

## HammerBlow Jacks

Top Wind (TWR)



Side Wind (SWR)



### Features:

- Engineering test programs have determined the optimum "Tube Overlap" to minimize side load failures.
- "Outer Tube" is engineered to handle both vertical and side loads with ease. Provides dependability and long life.
- "Inner Screw" features rolled Acme Threads providing long lift and low handle effort. Nearly a half-century of proven, dependable service in the field.
- Extensive lab and field testing of "Inner Tube" guarantees an extra margin of strength and durability.
- Large load-bearing "Disc Foot" provides stability you can count on.
- Reduced "Handle Effort" achieved through use of alloy Nut and Thrust Bearings. Extensively field tested and proven on the job.
- "Handle" is right length for smooth cranking action— eight turns per inch of travel. Folds and locks out of the way when not in use. Hefty Knob is secure and comfortable in hand.
- "Extrusions" on swivel Plate Face provide clearance so dirt can fall free.
- Made in USA.

### Clearance Dimensions Fully Retracted Foot

PART NO.	CAPACITY	A	B
JAC5010TWR	5,000 lb.	7 ¼"	11 ¼"
JAC5015TWR	5,000 lb.	13 ¼"	14 ½"
JAC5010SWR	5,000 lb.	6 ¼"	10"
JAC5015SWR	5,000 lb.	6 ¼"	15"



PART NO.	DESCRIPTION
JAC500106	Sidewind Gear Kit For 150 Series And 170 Series



PART NO.	DESCRIPTION
JACBE-705	Replacement Drop Leg



PART NO.	DESCRIPTION
JAC280304-7	Side Wind Crank



PART NO.	DESCRIPTION
JAC005006	Male Mount Tube 5/8" Pin



PART NO.	DESCRIPTION
JAC500256	Sidewind Crank Assembly For 150 Series



PART NO.	DESCRIPTION
JACTJD-12000-H	12k# Sw Jack Handle



PART NO.	DESCRIPTION
JAC107472	Pin Chain & Lynch Pin For 190 Series Drop Leg Jacks



## 10,000 lb. Lift Capacity Sidewind Spring Return Drop-Leg Square Jacks

- Features:
- 12,000 lb. static load capacity.
- Force-reducing gear ratios allow you to crank smoothly under load with little effort.
- All surfaces are coated for weather-resistance.
- Square tubing mounts anywhere.
- Long lasting non-welded bearing seat.
- Sure stop protection built in.
- Smooth, trouble-free cast iron screw nut.
- Hole in outer tube for screw and nut lubrication.
- Tubing painted gray with anti-corrosive primer.
- Telescoping legs formed of heavy-wall, square steel tubing.
- 5 locking position reinforced against hole elongation and loss of compression strength.
- Locking cam assist plunger pin.



PART NO.	MODEL NO.	WEIGHT	DESCRIPTION
JAC10125SWR-DL	SWQ 180 DL-BC-SR	61 lb.	Sidewind Drop Leg Jack with spring return, std. disc foot & crank

## Bulldog A-Frame Jack

### 5,000 Lb. Topwind Model TWL 155HD

#### Features:

- A-Frame mounting design.
- Will accept steel caster wheel (sold separately).
- Will accept detachable disc foot (sold separately).
- Made in USA.
- 15" of travel adjustments.
- Ideal for recreation or stock trailers.
- Weighs 13.3 lbs. without wheel or disc foot.



PART NO.
JACA5015TW

## Accessories for A-Frame Jack

### Removable Steel Caster Wheel

- With snapper pin.
- 500 lb. capacity.

PART NO.
JAC017125



### Detachable Disc Foot

- 6" long. Without snapper pin.
- 2,000 lb.
- 5,000 lb.
- 7,000 lb.

PART NO.
JAC018173



## Genuine Replacement Jack Parts

### Top-Selling Replacement Parts

PART NO.	DESCRIPTION	USED ON JACK SERIES #
JAC500105	Sidewind Crank Assembly with Black Knob	170, 5010SWR, 5015SWR
JAC500180	Topwind Crank Assembly with Red Knob	150, 160, 170, A5015, 5010, 5015
JAC500223	Thrust Bearing - 5,000 lb.	170, 5010, 5015
JAC500224	Thrust Bearing 7,000 lb.	190, A7015
JAC500231	5/8" Pull Pin, 3.5" Long, with Chain	170, 5010, 5015
JAC500232	5/8" Pull Pin, 4.25" Long, with Chain	190
JAC500238	Trailer Mount, Female, Weld-on, for 5/8" Pin	190
JAC500239	Trailer Mount, Male, Weld-on, for 9/16" Pin	150, 170, A5015, 5010, 5015
JAC500243	9/16" Pull Pin with 12.25" Chain	150, 170 Topwind, A5015, 5010, 5015

### OPEN SALES OPPORTUNITIES

- Sturdy
- Easy to Display
- Self-Selling

### Clam Shell Replacement Part Kits

- Genuine HammerBlow Parts.
- The most trusted name in the industry.
- Stock near HammerBlow BULLDOG
- jacks for aftermarket sales.

## Hitch Pins

### SOLID VINYL DIPPED HANDLE

Hair Pin Included

PART NO.	DIA.	USABLE LENGTH
HAR12	1/2"	3 5/8"
HAR58-4	5/8"	4"
HAR58	5/8"	5 1/2"
HAR34-4	3/4"	4"
HAR34	3/4"	6 1/2"
HAR78	7/8"	6 1/2"
HAR100	1"	7 1/2"
HAR1125	1 1/8"	8 1/2"
HAR1250	1 1/4"	8 1/2"
HAR1500	1 1/2"	8 1/2"

High Strength Hitch Pins - Grade 5 are a type of hitch pin made from strong materials and designed to withstand heavy loads. They are commonly used in agricultural and industrial settings to secure attachments to a hitch receiver on a tractor or other heavy machinery.

PART NO.	DESCRIPTION
HAR66255	Hitch Pin 1 X 4-1/2 C/W Clip"

### PULL PIN

This Pull Pin is designed for various applications and features a 5/8 inch diameter pin with a 3 inch usable length. It is packaged for convenience and easy storage. Ideal for use in agriculture, industrial, and automotive markets



PART NO.	DESCRIPTION
HAR66271	Bent Pull Pin PULL PIN 5/8"x 3"

## Quick Hitch Adapter Kits

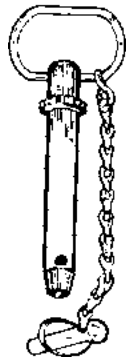
- Precision machined from hardened steel, heavy-duty Double HH quick hitch adapter kits feature yellow zinc plating for added corrosion resistance.
- 2 Adapters 1-1/8 " ID, 1-7/16 " Outside Diameter X 2-3/4 "; 2 Slotted Spring Pins 7/16 " X 1-1/2 "



PART NO.	CATEGORY	WEIGHT
HAR10226	2-3	2.30

### FOLD OVER HANDLE WITH LINCH PIN & CHAIN

PART NO.	DIA.	USABLE LENGTH
HAR408	3/4"	3 7/8"
HAR04	3/4"	6"



PART NO.	DIA.	USABLE LENGTH
HAR00198	2"	8-1/2 "
HAR00398	2"	13"



### FORGED STEEL HITCH PINS

Forged Steel Hitch Pins are heavy-duty fasteners designed to secure equipment coupling to a towing vehicle. Made of high-grade forged steel, they provide maximum strength and are commonly used in agricultural, industrial, and automotive applications



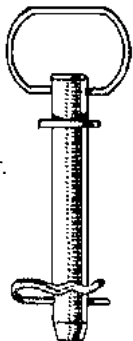
PART NO.	DESCRIPTION
HAR66884	1-3/8 X 7

### ZINC PLATED

Feature high shear strength material, easy grip pull ring and high tension Hairpin Cotter. They are made of 1039, 1045, or 4040 steel with a Rockwell hardness of 38-44, and are zinc plated with a dichromate dip for corrosion resistance.

Hairpin included

\*Length is effective length under collar to hole.



PART NO.	SIZE	LENGTH*
HAR3101	3/8" x 4 3/8"	4"
HAR3103	1/2" x 4 3/4"	4"
HAR3105	1/2" x 6 1/2"	5 3/4"
HAR3107	5/8" x 4 3/4"	4"
HAR3109	5/8" x 6 1/2"	5 3/4"
HAR3113	3/4" x 4 3/4"	4"
HAR3117	3/4" x 7"	6 1/4"
HAR3121	7/8" x 8"	7"
HAR3123	1" x 8"	7"
HAR3125	1 1/8" x 7 3/4"	7"
HAR3129	1 1/8" x 7 3/4"	7"

## CLAMPS AND CABLE TIES

### Clamps



#### HEAVY DUTY BOLT CLAMPS

- 430 Stainless Steel band with bevelled edge
- Zink Plated Bolt
- No. is size in millimeters

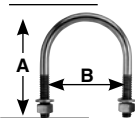
NO.	SIZE
<b>0.708" Band</b>	
SPPC17-19	0.67" - 0.75"
SPPC19-21	0.75" - 0.83"
SPPC21-23	0.83" - 0.91"
SPPC25-27	0.98" - 1.06"
SPPC27-29	1.06" - 1.14"
<b>0.787" Band</b>	
SPPC29-31	1.14" - 1.22"
SPPC31-34	1.22" - 1.34"
SPPC34-37	1.34" - 1.46"
SPPC37-40	1.46" - 1.57"
SPPC40-43	1.57" - 1.69"
SPPC43-47	1.69" - 1.85"
SPPC47-51	1.85" - 2.01"
SPPC55-59	2.17" - 2.32"
SPPC59-63	2.32" - 2.48"
<b>0.984" Band</b>	
SPPC63-68	2.48" - 2.68"
SPPC68-73	2.68" - 2.87"
SPPC73-79	2.87" - 3.11"
SPPC79-85	3.11" - 3.35"
SPPC85-91	3.35" - 3.58"
SPPC91-97	3.58" - 3.82"
SPPC97-104	3.82" - 4.09"
SPPC104-112	4.09" - 4.41"
SPPC112-121	4.41" - 4.76"
SPPC121-130	4.76" - 5.12"
<b>1.024" Band</b>	
SPPC131-139	5.16" - 5.47"
SPPC140-148	5.51" - 5.83"
SPPC149-161	5.87" - 6.34"
SPPC162-174	6.38" - 6.85"
SPPC175-187	6.89" - 7.36"
SPPC188-200	7.40" - 7.87"
SPPC201-213	7.91" - 8.39"
SPPC214-226	8.43" - 8.90"
SPPC227-239	8.94" - 9.41"
SPPC240-252	9.45" - 9.92"



#### T-BOLT HOSE CLAMPS

- All Stainless Steel construction
- Ideal for high torque applications
- 360° sealing surface

NO.	SIZE
SPPG89-022	1.38" - 1.56"
SPPG89-024	1.50" - 1.69"
SPPG89-026	1.62" - 1.81"
SPPG89-028	1.75" - 2.00"
SPPG89-030	1.88" - 2.13"
SPPG89-032	2.00" - 2.25"
SPPG89-034	2.13" - 2.38"
SPPG89-036	2.25" - 2.56"
SPPG89-038	2.38" - 2.69"
SPPG89-040	2.50" - 2.81"
SPPG89-042	2.63" - 2.94"
SPPG89-044	2.75" - 3.06"
SPPG89-046	2.88" - 3.15"
SPPG89-049	3.06" - 3.38"
SPPG89-052	3.25" - 3.56"
SPPG89-054	3.38" - 3.69"
SPPG89-057	3.56" - 3.88"
SPPG89-061	3.81" - 4.13"
SPPG89-065	4.06" - 4.38"
SPPG89-069	4.31" - 4.63"
SPPG89-073	4.56" - 4.88"
SPPG89-077	4.81" - 5.13"
SPPG89-081	5.06" - 5.38"
SPPG89-085	5.31" - 5.63"
SPPG89-089	5.56" - 5.88"
SPPG89-096	6.00" - 6.32"
SPPG89-100	6.25" - 6.56"
SPPG89-104	6.50" - 6.81"
SPPG89-108	6.75" - 7.06"
SPPG89-116	7.25" - 7.56"
SPPG89-124	7.75" - 8.06"
SPPG89-132	8.25" - 8.56"
SPPG89-148	9.25" - 9.56"
SPPG89-164	10.25" - 10.56"



#### STAINLESS STEEL 3/8" "U" BOLT

MFG.		SIZE	
NO.	NO.	A	B
SPPUB100	UB100	3/4"	1 11/16"
SPPUB202	UB202	3/4"	2 1/2"



#### GLOBAL "GS" SERIES

- Plated carbon screw
- 301 SS band & housing

NO.	SIZE
<b>Mini Clamp 3/8" Band, 1/4" Screw</b>	
SPPHF-4	1/4" - 5/8"
SPPHF-5	5/16" - 7/8"
<b>Standard 1/2" Band, 5/16" Screw</b>	
SPPHF-6	3/8" - 7/8"
SPPHF-8	7/16" - 1"
SPPHF-10	1/2" - 1 1/16"
SPPHF-12	1/2" - 1 1/4"
SPPHF-16	11/16" - 1 1/2"
SPPHF-20	1" - 1 3/4"
SPPHF-24	1" - 2"
SPPHF-28/30	1 7/16" - 2 3/8"
SPPHF-32	1 1/2" - 2 1/2"
SPPHF-36	1 3/4" - 2 3/4"
SPPHF-40	2" - 3"
SPPHF-44	2 1/4" - 3 1/4"
SPPHF-48	2 1/2" - 3 1/2"
SPPHF-52	2 3/4" - 3 3/4"
SPPHF-56	3" - 4"
SPPHF-64	2 1/2" - 4 1/2"
SPPHF-72	3" - 5"
SPPHF-80	3 1/2" - 5 1/2"
SPPHF-84	4 3/8" - 5 11/16"
SPPHF-88	4" - 6"
SPPHF-96	4 1/2" - 6 1/2"
SPPHF-104	5" - 7"
SPPHF-116	5 3/4" - 7 3/4"
SPPHF-124	6 7/8" - 8 1/4"
SPPHF-128	7 5/8" - 8 1/2"
SPPHF-152	8" - 10"
SPPHF-156	8 7/8" - 10 1/4"
SPPHF-188	10 1/2" - 12 1/4"
SPPHF-212	12 5/16" - 13 5/8"
SPPHF-224	11 5/8" - 14 1/2"



#### ZINC PLATED STEEL PINCH CLAMPS

NO.	SIZE
SPP3628	1/8"
SPP3631	1/4"
SPP3643	1"
SPP3645	1 1/8"
SPP3649	1 1/2"
SPP3650	1 5/8"
SPP3651	1 3/4"

#### SS T-BOLT SUPER CLAMPS



- 304 Stainless steel bolt with 316 SS nut to prevent seizing
- 360° sealing surface
- Ideal for high torque applications
- 3 spot welds for extra strength

NO.	SIZE
SPPTC150	1.50" - 1.75"
SPPTC162	1.62" - 1.87"
SPPTC218	2.18" - 2.50"
SPPTC231	2.31" - 2.63"
SPPTC250	2.50" - 2.81"
SPPTC287	2.87" - 3.18"
SPPTC331	3.31" - 3.62"
SPPTC343	3.50" - 3.82"
SPPTC438	4.38" - 4.76"



#### NYLON HOSE CLAMPS

- Corrosion resistant
- Fast installation & removal
- Patented design eliminates leaks

NO.	SIZE
SPP3611	0.24" - 0.26"
SPP3612	0.36" - 0.39"
SPP3614	0.48" - 0.57"
SPP3615	0.54" - 0.61"
SPP3621	1.03" - 1.19"
SPP3622	1.25" - 1.42"
SPP3624	1.59" - 1.81"
SPP3625	1.80" - 2.11"
SPP3626	1.87" - 2.12"
SPP3627	2.12" - 2.40"



#### 316 STAINLESS STEEL PINCH CLAMPS

NO.	SIZE
SPP3628SS	1/8"
SPP3633SS	3/8"
SPP3645SS	1 1/8"
SPP3649SS	1 1/2"
SPP3650SS	1 5/8"
SPP3651SS	1 3/4"


**GLOBAL  
"GS" 300 SS  
SERIES**

- 304 SS screw
- 301 SS band & housing


**SUPER CLAMP**

(Call for information if part numbers are not listed)


**Punch Clamps**
**CARBON PUNCH CLAMP**


PART NO.

SPPP-1000

**CARBON PUNCH CLAMP**

5/8" WIDTH



NO.	SIZE
SPPPC-6	1½"
SPPPC-8	2"
SPPPC-10	2½"
SPPPC-12	3"
SPPPC-16	4"
SPPPC-20	5"
SPPPC-24	6"

**STAINLESS STEEL  
PUNCH CLAMP**


NO.	SIZE
SPPPC-6S	1½"
SPPPC-8S	2"
SPPPC-10S	2½"
SPPPC-12S	3"
SPPPC-16S	4"
SPPPC-20S	5"
SPPPC-24S	6"
SPPPC-28S	7"

NO.	SIZE
<i>Mini Clamp 3/8" Band, 1/4" Screw</i>	
SPPHF-4-SS	1/4" - 5/8"
SPPHF-5-SS	5/16" - 7/8"
<i>Standard 1/2" Band, 5/16" Screw</i>	
SPPHF-6-SS	3/8" - 7/8"
SPPHF-8-SS	7/16" - 1"
SPPHF-10-SS	1/2" - 1¼"
SPPHF-12-SS	1/2" - 1¼"
SPPHF-16-SS	11/16" - 1½"
SPPHF-20-SS	3/4" - 1¾"
SPPHF-24-SS	1" - 2"
SPPHF-28/30-SS	17/16" - 2¾"
SPPHF-32-SS	1½" - 2½"
SPPHF-36-SS	1¾" - 2¾"
SPPHF-40-SS	2" - 3"
SPPHF-44-SS	2¼" - 3¼"
SPPHF-48-SS	2½" - 3½"
SPPHF-52-SS	2¾" - 3¾"
SPPHF-56-SS	3" - 4"
SPPHF-64-SS	2½" - 4½"
SPPHF-72-SS	3" - 5"
SPPHF-80-SS	3½" - 5½"
SPPHF-88-SS	4" - 6"
SPPHF-96-SS	4½" - 6½"
SPPHF-104-SS	5" - 7"
SPPHF-116-SS	5¾" - 7¾"
SPPHF-128-SS	6½" - 8½"
SPPHF-140-SS	7¾" - 9¾"
SPPHF-152-SS	8" - 10"
SPPHF-160-SS	9½" - 10½"
SPPHF-180-SS	10¾" - 12¼"
SPPHF-212-SS	12½" - 13½"

PART NO.	DESCRIPTION
SPP75807	2-7/8" To 3-3/32" Super Clamp
SPP75806	O2-11/16" To 2-7/8" Superclamp
SPP75804	2-5/16" To 2-15/32" Super Clamp
SPP75800	1-11/16" To 1-27/32" Super
SPP75803	2-5/32" To 2-5/16" Super Clamp
SPP75808	3-3/32" To 3-5/16" Super Clamp
SPP75830	3-3/32 To 3-5/16" Stainless
SPP75805	2-15/32" To 2-11/16" Super
SPP75802	2" To 2-5/32" Super Clamp
SPP75798	1-7/16" To 1-9/16" Super Clamp
SPP75797	1-7/32" To 1-5/16" Super Clamp
SPP75810	3-9/16" To 3-13/16" Superclamp
SPP75801	1-27/32" To 2" Super Clamp
SPP75796	1-5/32" To 7/32" Super Clamp
SPP75827	1-7/16" To 1-9/16" Stainless
SPP75818	6-3/8" To 6-7/8" Super Clamp
SPP75817	5-7/8" To 6-3/8" Super Clamp
SPP75816	5-1/2" To 5-7/8" Super Clamp
SPP75815	5-1/8 To 5-1/2" Super Clamp
SPP75814	4-3/4" To 5-1/8" Super Clamp
SPP75811	3-13/16" To 4-3/32" Superclamp
SPP75795	1-1/16" To 1-5/32" Super Clamp
SPP75813	4-3/8" To 4-3/4" Super Clamp
SPP75794	29/32" To 1" Super Clamp
SPP75819	6-7/8" To 7-3/8" Super Clamp
SPP75812	4-3/32" To 4-3/8" Super Clamp
SPP75793	13/16" To 29/32" Super Clamp
SPP75821	7-7/8" To 8-3/8" Super Clamp
SPP75792	11/16" To 3/4" Super Clamp
SPP75831	3-13/16" To 4-3/32" Stainless
SPP75832	4-3/4" To 5-1/8" Stainless
SPP75809	3-5/16" To 3-9/16" Super Clamp



- 3 spot welds for extra strength.
- 360° sealing surface.
- Ideal for high torque applications.
- Nylon lock nut feature.
- Stainless steel bolt with silver plated nut to prevent seizing.
- Stainless steel construction.
- Str N, Positive connections where ordinary hose clamps fail.
- T-bolt design.

PART NO.	DESCRIPTION
SPPTC130	Tc425 Super Clamp
SPPTC162	Tc162 Super Clamp
SPPTC181	Tc181 Super Clamp
SPPTC193	Tc193 Super Clamp
SPPTC224	Tc224 Super Clamp
SPPTC312	Tc312 3" T-Bolt Hose Clamp
SPPTC425	Tc425 Super Clamp
SPPTC456	Nrs Tc456 Super Clamp



## Aba Rubberlined Clips



For reliable, vibration-damping support For pipes, cables, groups of cables, hoses, etc. The clip is made from galvanized steel strip, the inside and edges of which are protected by a rubber section. Impacts and vibrations are damped by the rubber, which also eliminates wear. On tightening the band adapts itself easily to the dimension it is to fit. One of the fastening holes is oval to permit any subsequent adjustment.



### Applications

Rubber-lined hose clips are used in the automotive industry, mechanical and apparatus construction, electrical, hydraulic and pneumatic engineering, process industry, shipbuilding, refrigeration and freezing plants, etc.

*Also available in stainless steel upon special request (sold in packages of 50 each)*

PARTNO.	CLAMPING RANGE		BOLT HOLE SIZE (INCHES)
	INCHES	MM	
HAR31302	1/4	6	1/4
HAR31304	3/8	10	1/4
HAR31306	1/2	13	1/4
HAR31308	5/8	16	1/4
HAR31312	7/8	22	1/4
HAR31314	1	25	1/4
HAR31316	1 1/8	29	1/4
HAR31318	1 1/4	32	1/4
HAR31322	1 1/2	38	1/4
HAR31324	2	52	1/4
HAR31327	2 1/2	64	1/4

## Cable Ties



NYLON WHITE NO.	UV RESISTANT BLACK NO.	QTY.	LENGTH	TENSILE STRENGTH	MAX. DIAMETER	APPROX WIDTH
SPPCT018-04	SPPCTW018-04	100	4"	18 lbs	5/8"	.10"
SPPCT030-05.6	SPPCTW030-05.6	100	5 1/2"	40 lbs	1 1/4"	.13"
SPPCT040-08.5	SPPCTW040-08.5	100	8 1/2"	40 lbs	2"	.13"
SPPCT040-11.5	SPPCTW040-11.5	100	11 1/2"	40 lbs	3"	.146"
SPPCT040-14.5	SPPCTW040-14.5	100	14 1/2"	50 lbs	4"	.146"
UV Resistant Lashing Tie						
SPPCTW120-14.2		100	14.2"	120 lbs	4"	.30"
SPPCTW120-24.2		50	24.2"	175 lbs	7"	.30"
SPPCTW175-36		50	36"	175 lbs	10 3/4"	.345"
SPPCTW175-41		50	41"	175 lbs	12"	.345"



## ASSORTMENT KITS

### Cable Tie Assortments



(Display Stands Not Included)

PART NUMBER	DESCRIPTION
SHP54154	510 Pc Cable Tie Assortment
SHP54155	1210 Pc Cable Tie Assortment
SHP54157	1710 Assorted Cable Ties
SHP54410	4" Light Duty 100 Pc Cable Tie-Nat
SHP54412	4" Light Duty 100 Pc Cable Tie Blk
SHP54414	5" Light Duty 100 Pc Cable Tie Blk
SHP54416	5" Light Duty 100 Pc Cable Tie-Nat
SHP54418	8" Std Duty 100 Pc Cable Tie-Nat
SHP54420	8" Std Duty 100 Pc Cable Tie-Black
SHP54422	8" Light Duty 100 Pc Cable Tie-Blk
SHP54424	8" Light Duty 100 Pc Cable Tie-Nat
SHP54426	8" Heavy Duty 100 Pc Cable Tie-Blk
SHP54430	8" Scrw Mount 100 Pc Cable Tie-Blk
SHP54432	8" Std Duty 100 Pc Cable Tie-Orange
SHP54434	8" Std Duty 100 Pc Cable Tie-Yellow
SHP54436	8" Std Duty 100 Pc Cable Tie-Blue
SHP54438	8" Std Duty 100 Pc Cable Tie- Red
SHP54440	8" Std Duty 100 Pc Cable Tie-Green
SHP54444	11" Std Duty 100 Pc Cable Tie-Black
SHP54446	11" Std Duty 100 Pc Cable Tie-Nat
SHP54448	11" Std Duty 100pc Cable Tie Asst
SHP54454	14" Std Duty 100 Pc Cable Tie-Black
SHP54456	14" Std Duty 100 Pc Cable Tie Asst
SHP54458	14" Std Duty 100 Pc Cable Tie-Nat

### Electrical Assortment Kits



#### 158 PC WIRE CONNECTOR ASSORTMENT

Includes: 10 pc red, 18 pc yellow, 40 pc grey, 40 pc blue, 50 pc orange connectors

PART NUMBER	DESCRIPTION
SHP37135	158 PC Wire Connector Asst



#### 180 PC TERMINAL ASSORTMENT

Includes: Ring, terminal, fork and butt connectors, male and female disconnectors

PART NUMBER	DESCRIPTION
SHP37144	180 PC Terminal Asst



## 308 PC ELECTRICAL CONNECTOR ASSORTMENT

Includes: 150 pc cable ties, 131 pc wire connectors, 20 pc heat shrink tubing, 7 pc clamps

PART NUMBER	DESCRIPTION
SHP37139	308 PC Electrical Connector Asst



## 271 PC CRIMPING TOOL KIT

Includes: Butt, o-ring, fork connectors, insulated connectors, cable ties, heavy duty crimping tool

PART NUMBER	DESCRIPTION
SHP37146	271 PC Crimping Tool Kit

## Hardware Assortment Kits



## 315 PC ROLL PIN ASSORTMENT

A large assortment of both small and large roll pins for use in various automotive, household, and industrial applications.

Heat hardened, carbon, spring steel pins.

PART NUMBER	DESCRIPTION
SHP43060	315 Pc Roll Pin Assortment



## 74 PC UNIVERSAL CLEVIS PIN ASSORTMENT

Use to replace worn or damaged retaining pins or bolts for securing applications. Zinc plated 2" long pins with 8 adjustable holes.

Includes: 15 pc 1/4" x 2", 10 pc 5/16" x 2", 4 pc 3/8" x 2", 4 pc 7/16" x 2", 4 pc 1/2" x 2", and 37 pc hitch pin clips.

PART NUMBER	DESCRIPTION
SHP43120	74 Pc Universal Clevis Pin Asst

## 42 PC INSULATED CLAMP ASST

Rust resistant zinc plated steel with black rubber lining absorbs vibrations and jolts, reducing wear on cables and hoses

Includes: 20 pc 1/4", 6 pc. 3/8", 8 pc. 5/16", 4 pc. 1/2" & 4 pc. 5/8



PART NUMBER	DESCRIPTION
SHP43115	42 Pc Insulated Clamp Asst



SHP43124

### 555 PC COTTER PIN ASSORTMENT

A wide assortment of the most commonly used pins for securing applications.

Sizes: 1/16" x 1", 3/32" x 1", 3/32" x 1-1/2",  
1/8" x 1-1/4", 1/8" x 2", 5/32" x 2-1/2"



SHP43125

### 1000 PC COTTER PIN ASST.

A wide assortment of the most commonly used pins for securing applications.

Sizes: 1/16" x 1", 3/32" x 1", 3/32" x 1-1/2",  
1/8" x 1-1/4", 1/8" x 2", 5/32" x 2-1/2"



SHP43134

### 106 PC HEX CAP SCREW ASST.

Sizes: #8 x 32 x 1/2", #10 x 24 x 1/2",  
#10x24 x 1", 1/4" x 20 x 1/2", 1/4" x 20 x 1",  
5/16" x 18 x 1", 5/16" x 18 x 1-1/2",  
3/8" x 16 x 1", 3/8" x 16 x 1-1/2"



SHP43140

### 150 PC HAIR PIN ASSORTMENT

A complete collection of replacement hair pins. Zinc plated steel.

Sizes: 5/32" x 2-5/8", 9/64" x 1-3/4",  
3/64" x 1-5/8", 5/64" x 1-9/16",  
5/64" x 1-9/16", 3/32" x 1-3/16"



SHP43135

### 110 PC HYDRAULIC GREASE FITTINGS ASSORTMENT

Use for various replacement of missing or damaged fittings in hydraulic grease lines.

Zinc coated steel resists rust and corrosion.

Includes: straight, 45°, and 90°



SHP43139

### 150 PC LOCKNUT ASSORTMENT

Ideal for securing nuts in high vibration applications. Nylon inserts eliminate the need for lock washers.

Sizes: #10 x 24, 5/16" x 18, 1/4" x 20,  
3/8" x 16, 1/4" x 28, 1/2" x 13





SHP43163

## 240 PC NUT & BOLT ASST SAE

Use to replace broken, lost, or stripped nuts, bolts and screws around the home or workshop.

Machined and tempered low carbon steel. Zinc plated to resist rust and corrosion.



SHP43164

## 240 PC NUT & BOLT ASST MM

Use to replace broken, lost, or stripped nuts, bolts, and screws around the home or workshop.

Machined and tempered low carbon steel. Zinc plated to resist rust and corrosion.



SHP43159

## 200 PC HEX WASHER SCREW ASST

Super sharp tips seat faster than standard screws. Zinc plated carbon steel resists corrosion.

Includes: 30 pc #8 x 1/2", 30 pc #8 x 5/8", 30 pc #8 x 3/4", 30 pc #8 x 1", 20 pc #10 x 1/2", 20 pc #10 x 5/8", 20 pc #10 x 3/4", 20 pc 10 x 1"



SHP43165

## 300 PC E-CLIP ASSORTMENT

Replacement e-clips for securing applications.

Spring steel with black oxide finish resists corrosion.  
Sizes: 5/8", 3/4", 7/8", 1/16", 1/8", 3/16", 1/2", 1/4", 3/8"



SHP43183

## 92 PC MACHINE BUSHINGS ASST

Use to create gaps between fasteners and gears, pulleys or machine parts.

Zinc plated steel resists corrosion.  
Sizes: 1/2" ID, 5/8" ID, 3/4" ID, 7/8" ID, 1" ID, 1-1/4" ID, 1-3/8" ID, 1-1/2" ID, 1-3/4" ID



SHP43210

## 300 PC SNAP RING ASSORTMENT

Complete assortment of the most widely used snap rings in automotive applications.

Included sizes: 1/8", 7/16", 13/16", 1/2", 1", 5/32", 15/32", 7/8", 1/4", 9/16", 11/16", 5/16", 5/8", 3/8", 3/4", 1-1/4"



SHP43235

## 225 PC O-RING ASSORTMENT SAE

Use while working with plumbing, hydraulics, air and gas connections to prevent leaks. Nitrile Buna-N construction resists oil, gas, water and solvents.



SHP43236

## 225 PC O-RING ASSORTMENT MM

Use while working with plumbing, hydraulics, air, and gas connections to prevent leaks.

Nitrile Buna-N construction resists oil, gas, water and solvents.

## Pto Pin Assortment Kits



SHP16240

### 22 PC PTO PIN ASSORTMENT

10 pc 1/4" D pin, 7 pc 5/16" square lynch pin, 5 pc 3/8" D pin



SHP16241

### 20 PC PTO PIN ASSORTMENT

10 pc square 2-1/4" x 1/4", 5 pc round 2-1/2" x 5/16", 5 pc round 2-1/2" x 3/8"



SHP16244

### 50 PC LYNCH PIN ASSORTMENT

16 pc 3/16" x 1-7/16", 18 pc 1/4" x 1-3/4", 6 pc 5/16" x 1-3/4", 10 pc 7/16" x 1-3/4"



SHP16280

### 10 PC SAFETY LOCK PIN ASST.

10 pc 1/4" D pin, 7 pc 5/16" square lynch pin, 5 pc 3/8" D pin



SHP16282

### 20 PC SQUARE PTO PIN ASST.

120 pc 2-1/2" x 1/4"



SHP16284

### 20 PC ROUND PTO ASSORTMENT

20 pc 2-3/4" x 5/16"



SHP16286

### 20 PC ROUND PTO ASSORTMENT

20 pc 2-1/2" x 1/4"



SHP16288

### 20 PC ROUND LOCK PIN ASST.

10 pc 2-1/2" x 1/4", 5 pc 2-1/2" x 5/16", 5 pc 1-3/4" x 3/8"



SHP16293

### 103 PC R-CLIP ASSORTMENT

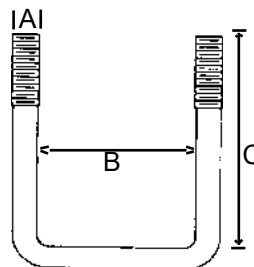
5pc 7/8"-1", 8pc 7/8"-1-1/4", 20pc 5/8"-1", 20pc 1/2"-3/4", 30pc 3/8"-1/2", 20pc 1/4"-1/2"



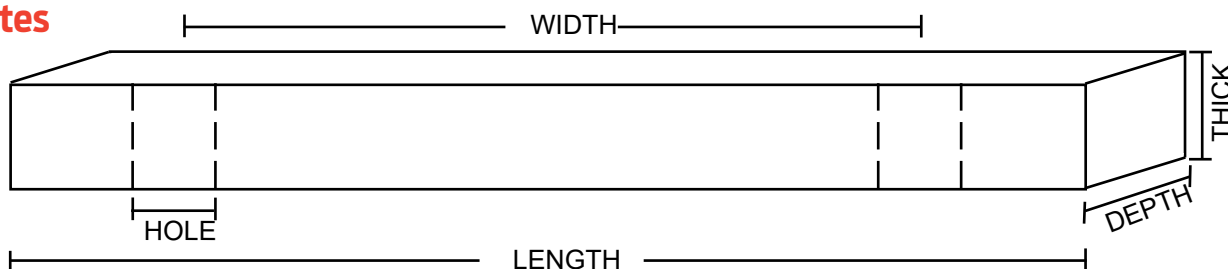
## FASTENERS

### U-Bolts

PART NO.	(A) THREAD DIA.	(B) OPENING	(C) LENGTH
BLTU504100	1/4"	1"	2"
BLTU504125	1/4"	1 1/4"	2 1/2"
BLTU505150	5/16"	1 1/2"	3"
BLTU506200	3/8"	2"	4"
BLTU506250	3/8"	2 1/2"	5"
BLTU508300	1/2"	3"	6"
BLTU508350	1/2"	3 1/2"	7"
BLTU508400	1/2"	4"	8"
BLTU510400	5/8"	4"	8"
BLTU510500	5/8"	5"	10"
BLTU510600	5/8"	6"	10"
BLTU512600	3/4"	6"	10"



### U-Bolt Plates



PART NO.	HOLE	W	L	DEPTH	TK
BLTUP1	5/16	1 1/4	2 1/4	3/4	3/16
BLTUP2	5/16	1 1/2	2 1/2	3/4	3/16
BLTUP3	3/8	1 3/16	3	1	1/4
BLTUP4	7/16	1 3/16	3	1	1/4
BLTUP5	7/16	2 7/8	4 7/8	1	3/8
BLTUP6	9/16	3 1/2	5	1 1/2	1/2

PART NO.	HOLE	W	L	DEPTH	TK
BLTUP7	9/16	4	5 1/6	1 1/2	1/2
BLTUP8	9/16	4 1/2	6	1 1/2	1/2
BLTUP9	11/16	4 5/8	6 5/8	2	3/4
BLTUP10	11/16	5 5/8	7 5/8	2	3/4
BLTUP11	11/16	6 5/8	8 5/8	2	3/4
BLTUP12	13/16	6 3/4	8 3/4	2	3/4

### Square Head Set Screws

UNC Coarse thread Square Head Set Screws are made of hardened 1018 carbon steel for strength. Cup point provides holding power. Black oxide finish.

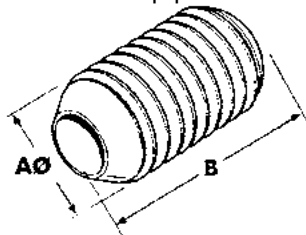


PART NO.	DIA.	THREADS PER INCH	LENGTH	WEIGHT PER 100
HAR5707	5/16"	18	1 1/4 UNC	2.73

PART NO.	DIA.	THREADS PER INCH	LENGTH	WEIGHT PER 100
HAR5714	3/8"	16	1 1/2 UNC	4.77

## Socket Set Screws - Allen Head Hex - Bulk

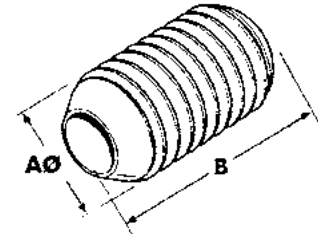
Socket set screws are made of heat treated alloy steel and have ground threads and standard cup point for holding power.



PART NO.	A X B	PART NO.	A X B
HAR 2942	1/4" x 1/4"	HAR 2948	5/16" x 1"
HAR 2943	1/4" x 1/2"	HAR 2949	3/8" x 3/8"
HAR 2946	5/16" x 1/2"	HAR 2950	3/8" x 1/2"
HAR 2947	5/16" x 3/4"	HAR 2951	3/8" x 3/4"
		HAR 2952	3/8" x 1"
		HAR 2953	1/2" x 1/2"
		HAR 2954	1/2" x 3/4"

## Socket Set Screws Assortment - 160 pc.

PART NO.
HAR 2955



Contains:

QTY.	A X B
20	3/16" x 1/2"
20	3/16" x 3/4"
20	1/4" x 1/4"
20	1/4" x 1/2"
20	1/4" x 3/4"
20	1/4" x 1"
20	5/16" x 1/2"

QTY.	A X B
20	5/16" x 3/4"
20	5/16" x 1"
20	3/8" x 3/8"
20	3/8" x 1/2"
10	3/8" x 3/4"
10	3/8" x 1"
10	1/2" x 1/2"
10	1/2" x 3/4"

## Top Link Threaded Repair Ends

- Sturdy, forged steel construction and screw-in attachment for Category 1, 2 and 3 tractor top links.



PART NO.	CATEGORY	HOLE DIA.	OVERALL LENGTH	THREAD LENGTH	THREAD	WEIGHT
HAR22648	1	3/4"	10"	6"	1-1/8" NC (RH)	2.40
HAR22650	2	1"	11"	6-1/2"	1-1/8" NC (RH)	3.30

## Ball Sockets

- Connect with quality: weld-on top link and lift arm ball sockets fit Category 0-3 tractors.
- Available with zinc plating for added corrosion resistance.



PART NO.	CATEGORY	BORE LENGTH	HOLE SIZE	OUTSIDE SLEEVE	WEIGHT
HAR22413	1	1-5/8"	3/4"	2"	0.70

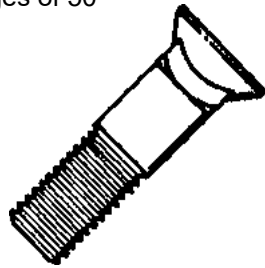
## Sweep Bolts with Nuts

Available in 3/8", 7/16", 1/2"

Grade 5 Chrome

NOTE: Bolts only sold in packages of 50

PART NO.	SIZE
BLT1304	3/8 x 1
BLT1301	3/8 x 1 1/4
BLT1302	3/8 x 1 1/2
BLT1303	3/8 x 1 3/4
BLT1305	3/8 x 2
BLT1700	7/16 x 1 1/4
BLT1701	7/16 x 1 1/2
BLT1702	7/16 x 1 3/4
BLT1703	7/16 x 2
BLT1704	7/16 x 2 1/4
BLT1705	7/16 x 2 1/2
BLT1200	1/2 x 1 1/4
BLT1211	1/2 x 1 1/2
BLT1208	1/2 x 1 3/4
BLT1201	1/2 x 2
BLT1202	1/2 x 2 1/4
BLT1203	1/2 x 2 1/2
BLT1210	1/2 x 2 3/4
BLT1204	1/2 x 3
BLT1206	1/2 x 3 1/2
BLT1207	1/2 x 4



7/16 BOLTS  
WITH 1/2" HEADS

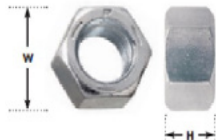
PART NO.	SIZE
BLT3701	7/16 x 1 3/4
BLT3702	7/16 x 2
BLT3703	7/16 x 2 1/2P
BLT3705	7/16 x 2 1/4

3/8 BOLTS  
WITH 7/16" HEADS

PART NO.	SIZE
BLT5301	3/8 x 1 1/4
BLT5302	3/8 x 1 1/2
BLT5303	3/8 x 1 3/4

## Finished Hex Nuts Unc

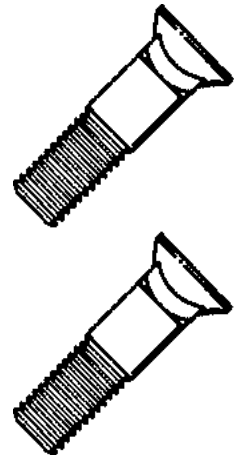
PART NO.	WEIGHT (LB) /100PCS	W	H	QTY
BLTBFN1	27.725	1-1/2	55/64	20
BLTBFN1/4	0.695	7/16	7/32	100
BLTBFN1-1/2	92.000	2-1/4	1-9/32	15
BLTBFN5/8	7.056	15/16	35/64	25



## Bulk Sweep Bolts

(Without Nuts)

PART NO.	SIZE	QTY.
BLTB1700	7/16 x 1 1/4	700
BLTB1701	7/16 x 1 1/2	600
BLTB1702	7/16 x 1 3/4	525
BLTB1703	7/16 x 2	475
BLTB1208	1/2 x 1 3/4	400
BLTB1201	1/2 x 2	350
BLTB1202	1/2 x 2 1/4	300
BLTB1203	1/2 x 2 1/2	275
BLTB1210	1/2 x 2 3/4	250
BLTB1204	1/2 x 3	225



## OVERSIZE HEAD BOLTS

PART NO.	SIZE	QTY.
BLTB5302	3/8 x 1 1/2OS	700
BLTB3701	3/8 x 2OS	450
BLTB3702	3/8 x 2 1/2OS	425
BLTB3705	7/16 x 1 1/4OS	375



## Bulk Hex Nuts - Grade 2

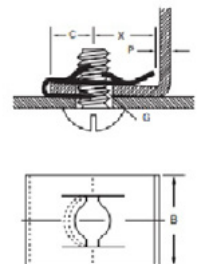
PART NO.	SIZE	QTY.
BLTB4001	3/8	2500
BLTB4002	7/16	1400
BLTB4003	1/2	1000



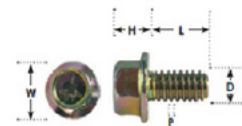
## J Type Fastener

Thread shaft, corner cut off

PART NO.	L X W	Thread Size
BLTB-1166	0.56" x 0.87"	#14



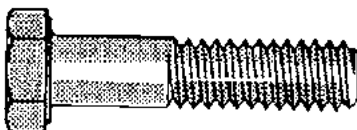
## Flange Bolts



PART NO.	W	H	Dia Pitch	L	QTY
BLTCB207125	1/2"	21/64"	5/16"-18	2	700

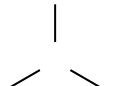
## Capscrews

Grade 5 Plated U.N.C. Coarse



NOTE: Quantities shown are standard packages and box will not be opened for lesser amounts.

Larger sizes are available upon request.

Head Marking	Specification	Material	Bolt Size (inches)	Proof Load P.S.I.	Tensile Strength P.S.I.	Hardness	
						Brinell	Rockwell
	S.A.E. Grade 5	Medium Carbon Steel Quenched & Tempered	1/4" thru 1" over 1"	85,000 74,000	120,000 min. 105,000 min.	255/321 223/285	C25/34 C19/30

### Bulk Quantities Available

PART NO.	QTY.	SIZE
BLT 504050	100	1/4" x 1/2"
BLT 504075	100	1/4" x 3/4"
BLT 504100	100	1/4" x 1"
BLT 504125	100	1/4" x 1 1/4"
BLT 504150	100	1/4" x 1 1/2"
BLT 504200	100	1/4" x 2"
BLT 504250	100	1/4" x 2 1/2"
BLT 505075	100	5/16" x 3/4"
BLT 505100	100	5/16" x 1"
BLT 505125	100	5/16" x 1 1/4"
BLT 505150	100	5/16" x 1 1/2"
BLT 505200	100	5/16" x 2"
BLT 505250	100	5/16" x 2 1/2"
BLT 505300	100	5/16" x 3"
BLT 506075	100	3/8" x 3/4"
BLT 506100	100	3/8" x 1"
BLT 506125	100	3/8" x 1 1/4"
BLT 506150	100	3/8" x 1 1/2"
BLT 506200	100	3/8" x 2"
BLT 506250	100	3/8" x 2 1/2"

PART NO.	QTY.	SIZE
BLT 506300	100	3/8" x 3"
BLT 506350	100	3/8" x 3 1/2"
BLT 506400	100	3/8" x 4"
BLT 506500	50	3/8" x 5"
BLT 506700	50	3/8" x 7"
BLT 507100	50	7/16" x 1"
BLT 507150	50	7/16" x 1 1/2"
BLT 507175	50	7/16" x 1 3/4"
BLT 507200	50	7/16" x 2"
BLT 507250	50	7/16" x 2 1/2"
BLT 507300	50	7/16" x 3"
BLT 507350	50	7/16" x 3 1/2"
BLT 507400	50	7/16" x 4"
BLT 508100	50	1/2" x 1"
BLT 508150	50	1/2" x 1 1/2"
BLT 508175	50	1/2" x 1 3/4"
BLT 508200	50	1/2" x 2"
BLT 508225	50	1/2" x 2 1/4"
BLT 508250	50	1/2" x 2 1/2"
BLT 508300	50	1/2" x 3"
BLT 508350	50	1/2" x 3 1/2"
BLT 508400	50	1/2" x 4"

PART NO.	QTY.	SIZE
BLT508500	50	1/2" x 5"
BLT508600	25	1/2" x 6"
BLT510150	25	5/8" x 1 1/2"
BLT510200	25	5/8" x 2"
BLT510250	25	5/8" x 2 1/2"
BLT510300	25	5/8" x 3"
BLT510350	25	5/8" x 3 1/2"
BLT510400	25	5/8" x 4"
BLT510450	25	5/8" x 4 1/2"
BLT510500	25	5/8" x 5"
BLT510550	25	5/8" x 5 1/2"
BLT510600	25	5/8" x 6"
BLT510700	25	5/8" x 7"
BLT512250	20	3/4" x 2 1/2"

PART NO.	QTY.	SIZE
BLT512300	20	3/4" x 3"
BLT512350	20	3/4" x 3 1/2"
BLT512400	20	3/4" x 4"
BLT512500	20	3/4" x 5"
BLT512600	20	3/4" x 6"
BLT512700	20	3/4" x 7"
BLT516200	20	1" x 2"
BLT516300	20	1" x 3"
BLT516400	10	1" x 4"
BLT516600	10	1" x 6"

## Carriage Bolts

Grade 2 Plated U.N.C. Coarse

### BOXED

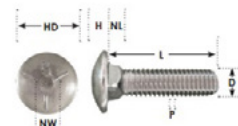
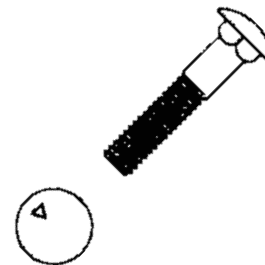
PART NO.	QTY.	SIZE
BLTCB205075	100	5/16 x 3/4
BLTCB205100	100	5/16 x 1
BLTCB205200	100	5/16 x 2
BLTCB206100	100	3/8 x 1
BLTCB206125	100	3/16 x 1 1/4
BLTCB206150	100	3/8 x 1 1/2
BLTCB206175	100	3/8 x 1 3/4
BLTCB206250	100	3/8 x 2 1/2

### BOXED

PART NO.	QTY.	SIZE
BLTCB207150	50	7/16 x 1 1/2
BLTCB208150	50	1/2 x 1 1/2
BLTCB208400	50	1/2 x 4

Grade 5 carriage bolts are also available

PART NO.	NW	H	DIA PITCH	L	QTY
BLTCB504200	0.26"	0.145"	1/4"-20	2	100
BLTCB504250	0.26"	0.145"	1/4"-20	2-1/2	100
BLTCB504300	0.26"	0.145"	1/4"-20	3	100
BLTCB505200	0.32"	0.176"	5/16"-18	2	100
BLTCB506100	0.39"	0.208"	3/8"-16	1	100
BLTCB506150	0.39"	0.208"	3/8"-16	1-1/2	100
BLTCB506200	0.39"	0.208"	3/8"-16	2	100
BLTCB507150	0.45"	0.239"	7/16"-14	1-1/2	50
BLTBCB206125	0.39"	0.208"	3/8"-16	1-1/4	100
BLTBCB507150	0.45"	0.239"	7/16"-14	1-1/2	400



## Plated Bulk Threaded Rod



Continuous threaded rod is threaded full length and made of cold drawn steel. Can be bent into any shape without heating. Used to make eye bolts, stud bolts, anchor bolts and for suspending equipment. Use for mounting on walls or benches in machine shops and garages. Just cut to length and use!

SIZE	PLATED PART NO.	BLACK PART NO.
1/4" x 36"	BLTTR1/4-36	BLTTRB1/4-36
5/16" x 36"	BLTTR5/16-36	BLTTRB5/16-36
3/8" x 36"	BLTTR3/8-36	BLTTRB3/8-36
7/16" x 36"	BLTTR7/16-36	BLTTRB7/16-36
1/2" x 36"	BLTTR1/2-36	BLTTRB1/2-36
5/8" x 36"	BLTTR5/8-36	BLTTRB5/8-36
3/4" x 36"	BLTTR3/4-36	BLTTRB3/4-36
7/8" x 36"	BLTTR7/8-36	BLTTRB7/8-36
1" x 36"	BLTTR1-36	BLTTRB1-36

## Alloy Threaded Rod



Same uses as plated bulk threaded rod but made of yellow zinc dichromate. Meets Grade 5 strengths. Available in UNC or UNF thread.

SIZE	UNC PART NO.	UNF PART NO.
1/4" x 36"	BLTTRA1/4-36	BLTTRA1/4-36NF
5/16" x 36"	BLTTRA5/16-36	BLTTRA5/16-36NF
3/8" x 36"	BLTTRA3/8-36	BLTTRA3/8-36NF
7/16" x 36"	BLTTRA7/16-36	BLTTRA7/16-36NF
1/2" x 36"	BLTTRA1/2-36	BLTTRA1/2-36NF
9/16" x 36"	BLTTRA9/16-36	-
5/8" x 36"	BLTTRA5/8-36	BLTTRA5/8-36NF
3/4" x 36"	BLTTRA3/4-36	BLTTRA3/4-36NF
7/8" x 36"	BLTTRA7/8-36	BLTTRA7/8-36NF
1" x 36"	BLTTRA1-36	BLTTRA1-36NF



## UNC Plated Nuts



PART NO.	PACKAGE QUANTITY	SIZE
BLTFN1/4	100	1/4"
BLTFN5/16	100	5/16"
BLTFN3/8	100	3/8"
BLTFN7/16	50	7/16"
BLTFN1/2	50	1/2"
BLTFN9/16	25	9/16"
BLTFN5/8	25	5/8"
BLTFN3/4	20	3/4"
BLTFN7/8	20	7/8"
BLTFN1	20	1

## Lock Nuts

"AH" Nylon Insert Lock Nuts - Plated Finish - UNC Coarse



PART NO.	PACKAGE QUANTITY	SIZE
BLTLN1/4	100	1/4"
BLTLN5/16	100	5/16"
BLTLN3/8	100	3/8"
BLTLN7/16	50	7/16"
BLTLN1/2	50	1/2"
BLTLN9/16	25	9/16"
BLTLN5/8	25	5/8"
BLTLN3/4	20	3/4"
BLTLN7/8	20	7/8"
BLTLN1	20	1"

## WASHERS AND BUSHINGS

### Quick Repair Washers



- No disassembly is needed! Excess play can be taken up easily without dismantling. Simply place Quick Repair washer over shaft in desired location.
- Pound tabs down firmly with hammer.
- Made in the USA using cold finished C1010 mild steel.
- Zinc plated to resist corrosion.
- Shaft sizes are stamped on each washer
- A must-have part for any maintenance shop, farm or construction site!

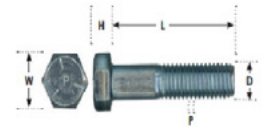
## External E-Clips



- External E-clips are radially installed tapered section retaining rings with three prongs that make constant contact with the bottom of the groove and provide a shoulder for effective retention of assemblies
- Phosphate finish is a thin external layer created by chemical application and can serve as a base for paint or oil, provide corrosion resistance, and reduce friction
- Carbon spring steel is high in strength and is known for its ability to resist deformation under stress

PART NO.	SIZE
HARBE-062	5/6"
HARBE-075	3/4"
HARBE-087	7/8"

## Hex Head Cap Screws



PART NO.	LENGTH	THREAD	QTY
BLTB508250	1/2 X 2-1/2	PT	225
BLTB512250	3/4 X 2-1/2	PT	90
BLTB504100	1/4 X 1	FT	2200

PART NO.	O.D.	I.D.	THICKNESS
HAR1QR	1 3/4"	3/4"	1/8"
HAR2QR	1 7/8"	7/8"	1/8"
HAR3QR	2"	1"	1/8"
HAR4QR	2 1/8"	1 1/8"	1/8"
HAR5QR	2 1/4"	1 1/4"	1/8"
HAR7QR	2 1/2"	1 1/2"	1/8"
HAR8QR	2 3/4"	1 3/4"	1/8"

## Flat Washers (Steel Plate)

FLAT WASHERS are great for adding resistance to your bolts and screws to prevent them from boring into the surface and weakening it. Used behind a nut or screw head to distribute load and to prevent material from buckling or screw pull-through

PLAIN STEEL WASHER-ZINC PLATED

Material: Carbon Steel

Finish: Zinc Plated



PART NO.	OUTSIDE DIAMETER
BLTFW1	CTN OF 20 1"
BLTFW1/4	CTN OF 100 1/4"
BLTFW7/16	CTN OF 50 7/16"
BLTFW7/8	CTN OF 20 7/8"
BLTFW1/2	CTN OF 50 1/2"
BLTFW5/8	CTN OF 25 5/8"
BLTFW3/4	CTN OF 20 3/4"
BLTFW3/8	CTN OF 100 3/8"
BLTB512250	CTN OF 90 3/4 X 2-1/2
BLTFW3/8-40	40# PKG 3/8" PLTD FLATWASHER

## Plated USS Flat Washers



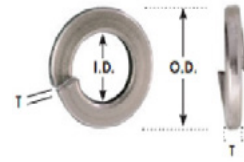
PART NO.	PACKAGE WEIGHT	SIZE
BLTFW5/16-5	5 lb.	5/16"
BLTFW9/16-5	5 lb.	9/16"

## Quick Repair Displays



PART NO.	DESCRIPTION
HAR30QR	30 bushings (3 to 4 of each size)

## Spring Lock Washers



LOCK WASHERS known as split lock washers are engineered to provide a more uniform load distribution. Ideal for situations where potential loosening from corrosion or vibration is a concern.

Zinc and yellow zinc plated fasteners have good corrosion resistant qualities and are a good choice for indoor, outdoor and industrial applications

PART NO.	BOLT SIZE	I.D.	O.D.	THICK-NESS	QTY
BLTBLW1/2	1/2	0.512	0.869	0.125	2500
BLT740-006	6	6.1	9.7	1.4	100

## Plated Spring Lock Washers



PART NO.	PACKAGE QUANTITY	SIZE
BLTLW1/4	100	1/4"
BLTLW5/16	100	5/16"
BLTLW3/8	100	3/8"
BLTLW7/16	100	7/16"
BLTLW1/2	100	1/2"
BLTLW9/16	100	9/16"
BLTLW5/8	100	5/8"
BLTLW3/4	100	3/4"

## Display Board Asst.

Display consists of 200 narrow and wide rim bushings in assorted sizes (listed below). Board is 20" x 12" and is made of 1/2" Pressboard. Weighs 12 lbs.



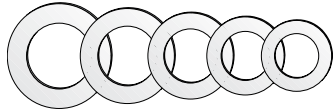
PART NO.
HARHB3

Includes:

10 of B1A	2 of B27	13 of B19
10 of B2A	2 of B29	6 of B21
10 of B4	10 of B103	4 of B23
10 of B6	10 of B104	2 of B25
15 of B8	10 of B105	6 of B109
15 of B11	10 of B106	6 of B111
15 of B14	10 of B107	5 of B103
13 of B17	6 of B108	

## Regular Machinery Bushings

Machinery bushings reduce wear between moving parts, prevent marring of fine finishes, and can be used as spacers for sprockets, pulleys and gears on new or old equipment. Plain finish.



### 18 GAUGE (LIGHT)

Thickness = .042/.054"

PART NO.	OUTSIDE DIAMETER	INSIDE DIAMETER
HARB0	7/8"	1/2"
HARB00	7/8"	1/2"
HARB1	1"	9/16"
HARB3	1-1/4"	3/4"
HARB102	1 1/8"	5/8"
HARB5	1 3/8"	7/8"
HARB7	1 1/2"	1"
HARB10	1-3/4"	1-1/8"
HARB13	1 7/8"	1 1/4"
HARB16	2 1/8"	1 3/8"
HARB18A	2 1/4"	1 1/2"
HARB37	2 3/8"	1 5/8"

## Wide Rim Machinery Bushings

### 18 GA. (LIGHT)

Thickness = .042/.054"



PART NO.	OUTSIDE DIAMETER	INSIDE DIAMETER
HARB102	1 1/4"	5/8"
HARB103	1 1/2"	3/4"
HARB104	1 3/4"	7/8"
HARB105	2"	1"
HARB106	2 1/8"	1 1/8"
HARB107	2 1/4"	1 1/4"
HARB108	2 1/2"	1 3/8"
HARB109	3"	1 1/2"
HARB111	3 1/4"	1 3/4"
HARB113	3 1/2"	2"
HARB114	3 5/8"	2 1/8"

## 14 GAUGE (MEDIUM)

Thickness = .068/.082"

PART NO.	OUTSIDE DIAMETER	INSIDE DIAMETER
HARB0	7/8"	1/2"
HARB1A	1"	9/16"
HARB2A	1"	5/8"
HARB4	1 1/4"	3/4"
HARB4A	1 1/4"	3/4"
HARB6	1 3/8"	7/8"
HARB6A	1 3/8"	7/8"
HARB8	1 1/2"	1"
HARB9	1 1/2"	1"
HARB11	1 3/4"	1 1/8"
HARB12	1 3/4"	1 1/8"
HARB14	1 7/8"	1 1/4"
HARB15	1 7/8"	1 1/4"
HARB17	2 1/8"	1 3/8"
HARB18	2 1/8"	1 3/8"
HARB19	2 1/4"	1 1/2"
HARB20	2 1/4"	1 1/2"
HARB21	2 1/2"	1 3/4"
HARB22	2 1/2"	1 3/4"
HARB23	2 7/8"	1 7/8"
HARB24	2 7/8"	1 7/8"
HARB25	3"	2"
HARB26	3"	2"
HARB27	3 1/8"	2 1/8"
HARB28	3 1/8"	2 1/8"
HARB29	3 1/4"	2 1/4"
HARB30	3 1/4"	2 1/4"
HARB34	3-1/2"	2-1/2"
HARB35	1"	5/8"
HARB36	2-3/8"	1-5/8"

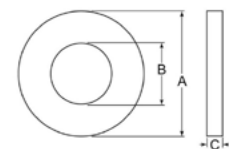
## 10 GAUGE (HEAVY)

Thickness = .126/.142"

PART NO.	OUTSIDE DIAMETER	INSIDE DIAMETER
HARB35	1"	5/8"
HARB4A	1 1/4"	3/4"
HARB6A	1 3/8"	7/8"
HARB9	1 1/2"	1"
HARB12	1 3/4"	1 1/8"
HARB15	1 7/8"	1 1/4"
HARB18	2 1/8"	1 3/8"
HARB20	2 1/4"	1 1/2"
HARB36	2 3/8"	1 5/8"
HARB22	2 1/2"	1 3/4"
HARB24	2 7/8"	1 7/8"
HARB28	3 1/8"	2 1/8"
HARB30	3 1/4"	2 1/4"
HARB34	3 1/2"	2 1/2"

## Machine Bushing Narrow Rims

Step-down flange makes it easy to adapt to smaller drawpins insuring a tight connection.



## 10 GAUGE ZINC CLEAR

PART NO.	OUTSIDE DIAMETER	INSIDE DIAMETER
HAR157011	1-1/4"	3/4"
HAR157034	2-1/4"	1-1/2"

## 18 GAUGE ZINC CLEAR

PART NO.	OUTSIDE DIAMETER	INSIDE DIAMETER
HAR157005	7/8"	1/2"

## 14 GAUGE ZINC CLEAR

PART NO.	OUTSIDE DIAMETER	INSIDE DIAMETER
HAR157014	1-3/8"	7/8"