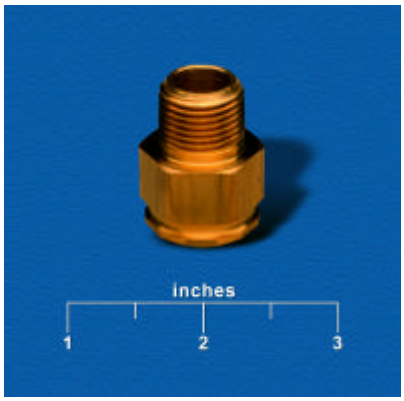
APPLICATION DATA SHEET

APPLICATION	Automotive/Truck
SPECIAL FEATURES	Meets DOT Safety Requirements
PART WEIGHT	0.091 lb. (Brass)
BRASS RAW MATERIAL PREMIUM	36% (Including Turnings Allowance)
CYCLETIME (C360 BRASS)	5.6 sec (515 pieces per hour @ 80% Efficiency)
CYCLETIME (12L14 STEEL)	9.1 sec (277 pieces per hour @ 70% Efficiency)
PRODUCTIVITY GAIN USING BRASS	86%
NET COST SAVINGS (BRASS VS. BARE STEEL)	19% = $46.00 per 1000
NET COST SAVINGS (BRASS VS.PLATED STEEL)*	23% = $59.47 per 1000
*Zinc/chromate; assumes 0% plating rejects.	



AIR BRAKE HOSE FITTING

STRENGTH PLUS CORROSION RESISTANCE EQUALS SAFETY

This air brake hose fitting, a typical screw machine part, has to be strong and corrosion resistant to meet DOT (Department of Transportation) safety requirements. Originally made from 12L14 leaded steel and zinc/chromate plated to retard corrosion from water and road salts, the fitting is now produced in Free-Cutting Brass, Copper Alloy 360 (UNS C36000). It's just as strong as steel, it doesn't have to be plated… and it costs 23% less. The strength of half-hard Free-Cutting Brass is in the same range as 12L14 steel. Published nominal values for these materials are:

MATERIAL	TENSILE PROPERTIES	
	YIELD STRENGTH	ULTIMATE STRENGTH
C36000	45 ksi	58 ksi
Hot Rolled 12L14	34 ksi	57 ksi
Cold Drawn 12L14	60 ksi	78 ksi

That means that for almost one-half of all screw machine products, brass can be substituted for leaded steel without any sacrifice in strength or safety.

BRASS PARTS COST LESS THAN STEEL

Many designers think that because brass costs more than steel, machined brass parts must cost more too. That's not true for typical screw machine jobs. Only brass rod's off-the-shelf material cost is significantly higher; this air brake hose fitting produces more than three times as much turnings weight as it does product and after discounting for the turnings' high value, the net material cost difference is only 36%.

HIGH MACHINABILITY MEANS LOWER PRODUCTION COSTS

When you buy machine parts you are paying for machine time. The faster the cut, the lower the cost, and free cutting brass machines faster than leaded steel. The productivity gained by switching from steel to brass for this actuating sleeve was a very significant 86%. How much can you save on your next screw machine part?

ELIMINATE PLATING COSTS

Steel rusts, brass tarnishes; an important difference. Exposed steel screw machine parts must be zinc/ chromate plated. Brass parts are ready to use without protective platings. The savings are between 11 and 16 cents per pound of product. If your part has deep holes, threads, or sharp corners, it can be difficult to insure uniform plating on all surfaces. Make the part in brass in you eliminate that concern. The natural corrosion resistance of brass uniformly protects the entire surface. If decorative plating is desired, brass plates more easily and is better looking than plated steel.

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