

# CHAMPION TRAILER PARTS SUPPLY

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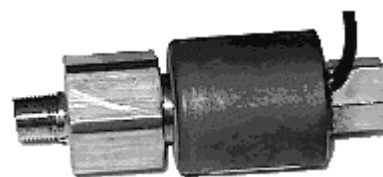
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## REVERSING SOLENOID VALVES

### [REVERSING SOLENOID FAQ](#)

#### BLOCKING SOLENOID VALVE

12 VDC - IN-LINE - NORMALLY OPEN SOLENOID VALVE.  
CLOSES WHEN ACTIVATED



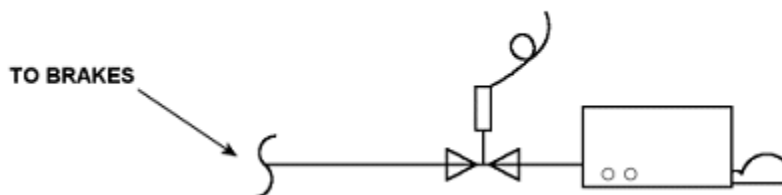
**PART# 1507**

WT .5#

**PRICE EA. \$49.95**

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#### BLOCKING SOLENOID INSTALLATION



- THE MALE THREAD ON THE BLOCKING SOLENOID IS 1/8" M.P.T (MALE PIPE THREAD). THIS IS A TAPERED THREAD.
- INSTALL TEFLON TAPE ON MALE PART OF THIS THREAD.
- THE FEMALE THREAD IS 3/16" I.F. (INVERTED FLARE). THIS IS THE THREAD OF STANDARD AUTOMOTIVE BRAKE LINE TUBING, AS WELL AS CHAMPION TRAILER'S STAINLESS BRAKE LINE TUBING.
- 3/16" BRAKE LINE TUBING OR MALE BRAKE HOSE THREADS WILL SCREW

DIRECTLY INTO THE FEMALE THREAD OF THE BLOCKING SOLENOID VALVE.

- 3/16" I.F. THREADS SEAL AT THE FLARE JOINT AND DO NOT REQUIRE TEFLON TAPE AS THREAD SEALANT
- THE SINGLE WIRE COMING FROM THE BLOCKING SOLENOID NORMALLY CONNECTS VIA A PLUG TO THE TOW VEHICLE'S "WHITE" BACK-UP LIGHTS. WHEN THE TOW VEHICLE IS PUT INTO REVERSE THE BACK-UP (WHITE) LIGHTS COME ON AND THE SOLENOID VALVE IS ACTIVATED BLOCKING FLUID PRESSURE FROM BEING APPLIED TO THE BRAKES.
- BE SURE THAT THE [WHITE] BACK UP LIGHTS DO NOT COME ON IN ANY OTHER GEAR OTHER THAN REVERSE. IF THEY DO, THE BRAKES WILL BE DISABLED IN THAT CONDITION.
- BLOCKING SOLENOID VALVES ARE VERY EFFECTIVE AND ARE USED ON MANY DISC BRAKE APPLICATIONS, HOWEVER IF YOU ATTEMPT TO BACK UP, IN AN UPHILL CONFIGURATION, IT MAY OCCUR THAT YOU WILL HAVE A PARTIAL ACTIVATION OF THE SURGE BRAKE COUPLER DUE TO THE COMPRESSIVE FORCES BEING APPLIED BETWEEN THE TOW VEHICLE AND THE TRAILER, PRIOR TO BACKING UP. THIS MAY DRASTICALLY IMPEDE YOUR ABILITY TO BACK UP THE HILL.

IF THIS OCCURS YOU MAY WANT TO CONVERT YOUR REVERSING SOLENOID TO A BLEED TYPE SOLENOID VALVE. WITH A BLEED TYPE SOLENOID VALVE, WHENEVER THE SOLENOID IS ACTIVATED, ALL FLUID PRESSURE IN THE SYSTEM IS DUMPED BACK TO THE RESERVOIR. THIS IS THE PREFERRED SOLENOID VALVE IF BACKING UPHILL IS ONE OF YOUR TOWING CONSIDERATIONS.

HOWEVER, THE BLEED TYPE SOLENOID [PART # 1504] REQUIRES THAT A RETURN LINE BE INSTALLED BACK TO THE BRAKE COUPLER MASTER CYLINDER RESERVOIR.

WHEN USING A BLEED TYPE SOLENOID VALVE, IF THE MASTER CYLINDER IS NOT EQUIPPED WITH A RETURN PORT MACHINED INTO IT, IT WILL BE NECESSARY TO DRILL AND TAP A 1/8" NPT RETURN PORT HOLE IN THE LOWER HALF OF THE MASTER CYLINDER RESERVOIR.

BE SURE TO KEEP METAL SHAVINGS OUT OF THE MASTER CYLINDER UPON COMPLETION OF THE MACHINING OPERATION.

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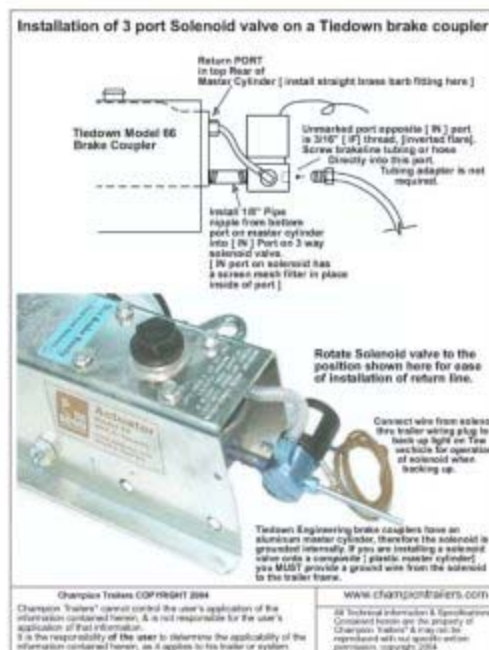
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**BLEED SOLENOID VALVE KIT****PART # 1504**

WT 1#

**PRICE EA. \$54.95**

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**[PRINTABLE SOLENOID INSTALLATION DRAWING](#)****PART # 1504 - REVERSING SOLENOID VALVE OPERATION:**

PART # 1504 IS A 3 PORT (BLEED UPON ACTIVATION) SOLENOID VALVE. IT HAS A 1/8" NPT (NATIONAL PIPE THREAD) FOR THE (IN) PORT WHICH HAS A STAINLESS SCREEN INTERNAL TO THAT PORT. THIS IS THE PORT THAT IS CONNECTED TO THE HYDRAULIC OUTPUT PORT FROM THE MASTER CYLINDER OF THE BRAKE COUPLER.

DIRECTLY OPPOSITE FROM THE (IN) PORT ON THE SOLENOID VALVE, IS THE PORT THAT IS CONNECTED TO THE BRAKE LINE TUBING GOING TO THE TRAILER BRAKES.

THIS PORT HAS 3/16" (I.F. - INVERTED FLARE) THREADS, WHICH IS THE THREAD FOR THE STANDARD BRAKE LINE TUBING, AND BRAKE HOSES. **DO NOT INSTALL TEFLON TAPE ON THREADS FOR 3/16" I.F. FITTINGS!** THEY ARE SELF SEALING.

THE THIRD PORT HAS 1/8" NPT THREADS AND HAS A 90° BRASS BARB FITTING INSTALLED. THIS FITTING IS WHERE THE RETURN LINE RUBBER HOSE IS CONNECTED FOR ROUTING BACK TO THE MASTER CYLINDER RESERVOIR.

IF YOUR MASTER CYLINDER DOES NOT HAVE A RETURN PORT MACHINED INTO THE MASTER CYLINDER RESERVOIR, YOU WILL NEED TO DRILL AND TAP A 1/8" MPT HOLE INTO THE LOWER HALF THE REAR OF THE RESERVOIR. **BE CAREFUL NOT TO GET METAL SHAVING IN THE MASTER CYLINDER DURING THE MACHINING PROCESS.**

THE (IN) PORT OF THE SOLENOID IS COMMON TO THE PORT WITH THE 3/16" I.F. THREADS, GOING TO THE TRAILER BRAKES. WHEN THE SOLENOID IS **NOT** ELECTRICALLY ACTIVATED BRAKE FLUID FLOWS IN AND OUT THRU THESE PORTS, DIRECTLY TO THE TRAILER BRAKES. WHEN THE SOLENOID IS NOT ELECTRICALLY ACTIVATED, THE RETURN PORT (GOING BACK TO THE MASTER CYLINDER RESERVOIR) IS CLOSED (NOT OPEN TO THE BRAKE SYSTEM).

WHEN THE SOLENOID VALVE IS ELECTRICALLY ACTIVATED, THE RETURN PORT OPENS, (BECOMES COMMON TO THE BRAKE SYSTEM PRESSURE). THIS ALLOWS ANY AND ALL BRAKE SYSTEM PRESSURE TO BE RELEASED BACK TO THE MASTER CYLINDER RESERVOIR VIA THE RETURN LINE HOSE.

ELECTRICAL ACTIVATION OF THE SOLENOID IS TYPICALLY ACCOMPLISHED BY CONNECTING THE VALVE ELECTRICAL WIRE VIA A PLUG INTO THE TOW VEHICLE BACK-UP LIGHTS. WHEN THE TOW VEHICLE IS PUT INTO REVERSE, THE SOLENOID IS ACTIVATED AND THE TRAILER BRAKES ARE DISABLED.

**BE SURE THAT THE BACK-UP LIGHTS DO NOT COME ON IN ANY GEAR OTHER THAN REVERSE. IF THE BACK-UP LIGHTS COME ON IN ANY OTHER DRIVING CONDITION THE BRAKES WILL BE DISABLED DURING THAT CONDITION.**

THE BLEED SOLENOID IS THE PREFERRED BRAKE LOCK OUT SOLENOID VALVE IF YOU ARE FINDING IT NECESSARY TO DO BACKING UP OPERATIONS IN AN UPHILL MODE.

IF YOU TOW ONLY IN FLAT LAND DRIVING AND BACKING-UP CONDITIONS THE BLOCKING SOLENOID [PART # 1507] MAY FULFILL YOUR BRAKE LOCKOUT NEEDS. WITH THE BLOCKING SOLENOID (PART #1507) IT IS NOT NECESSARY TO HAVE A RETURN LINE BACK TO THE MASTER CYLINDER RESERVOIR, HOWEVER IF BACKING UPHILL THE BLOCKING SOLENOID MAY CAUSE DIFFICULTY.

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