



**U.S. AIR FORCE**



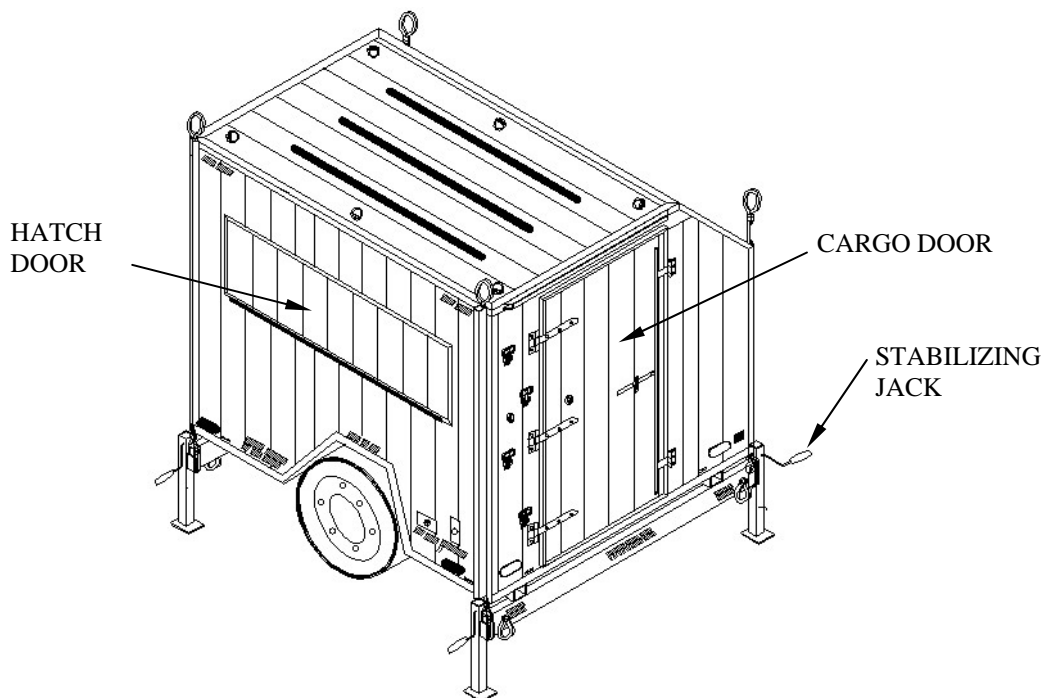
# MOBILITY/ SPEARR TRAILER

## SPARE PARTS MANUAL



## PARTS INDEX

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DESCRIPTION	PART NO.	QTY.
1) STEEL WHEEL 16 X 7K – 8 BOLT-6.50 B.C.	MT1670	3
2) TIRE- LT26575R16LT L.R.E.	MT1645	3
3) WHEEL CHOCK SET	MT1610	2
4) SPARE TIRE HARDWARE ASSEMBLY	MT1620	1

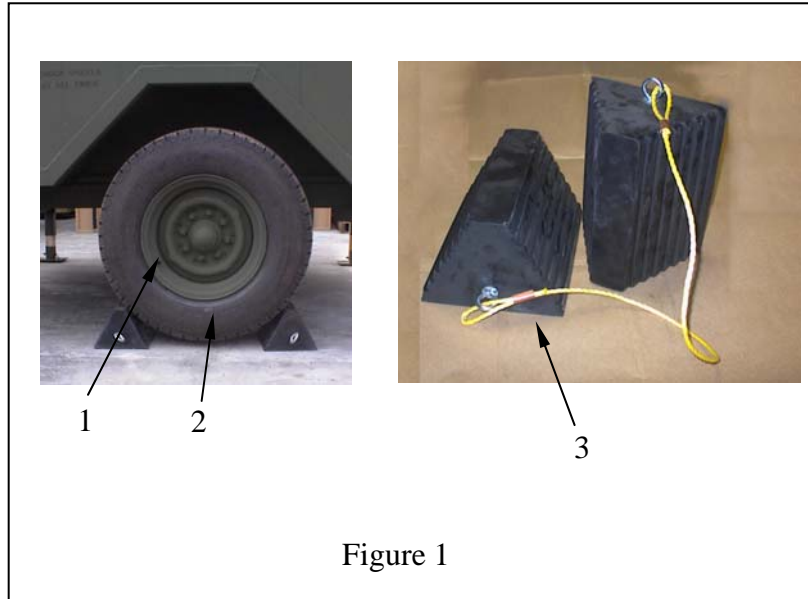


Figure 1

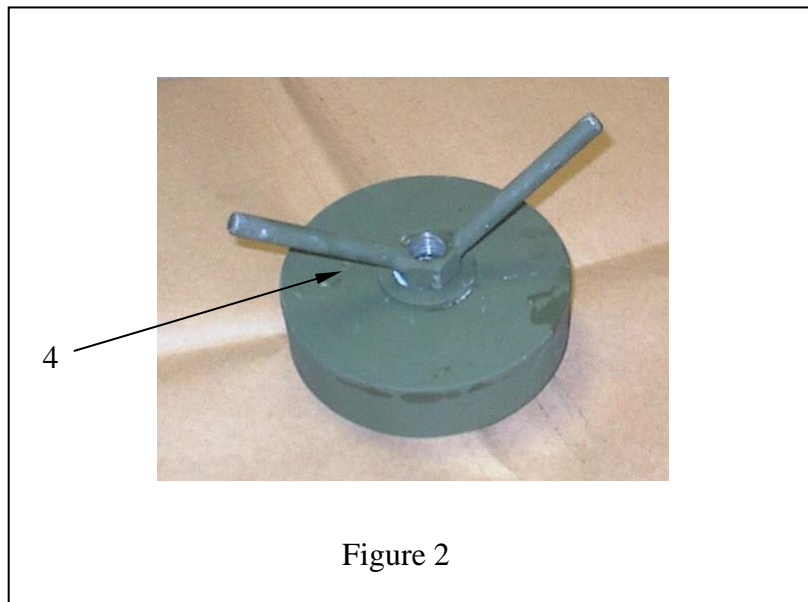
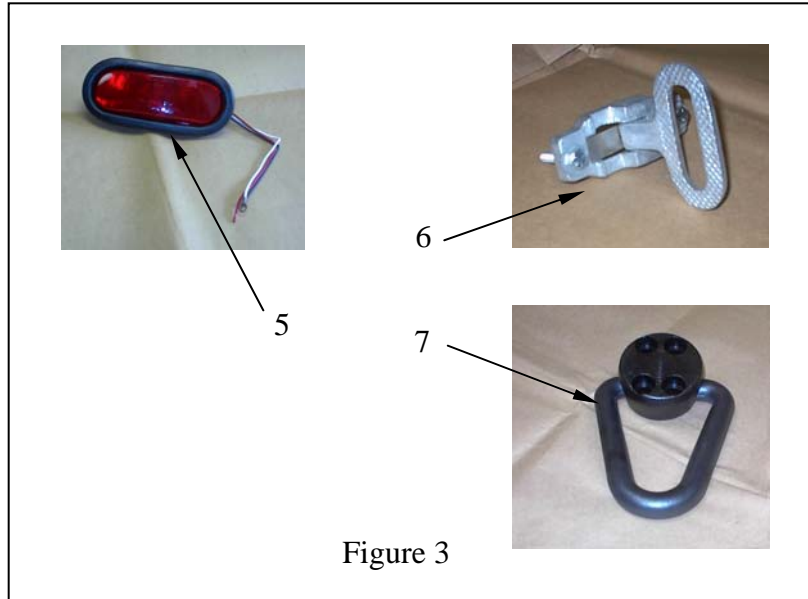
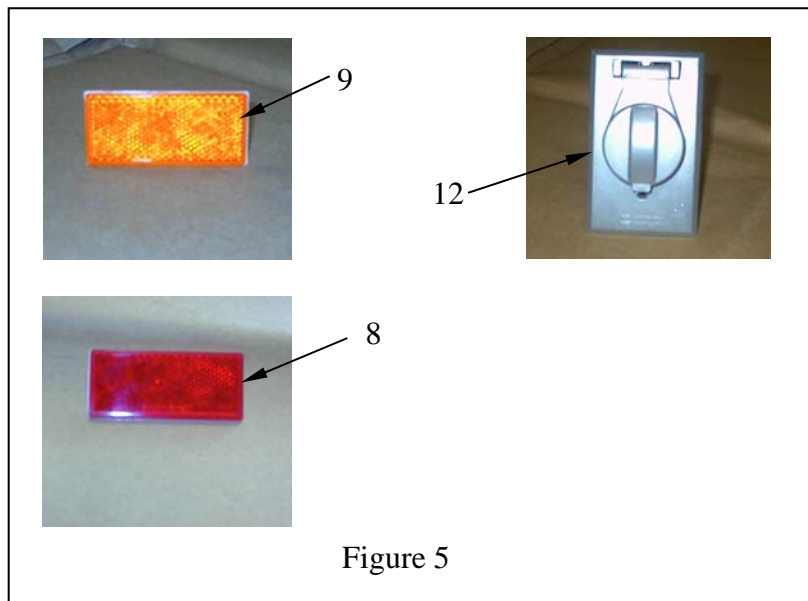
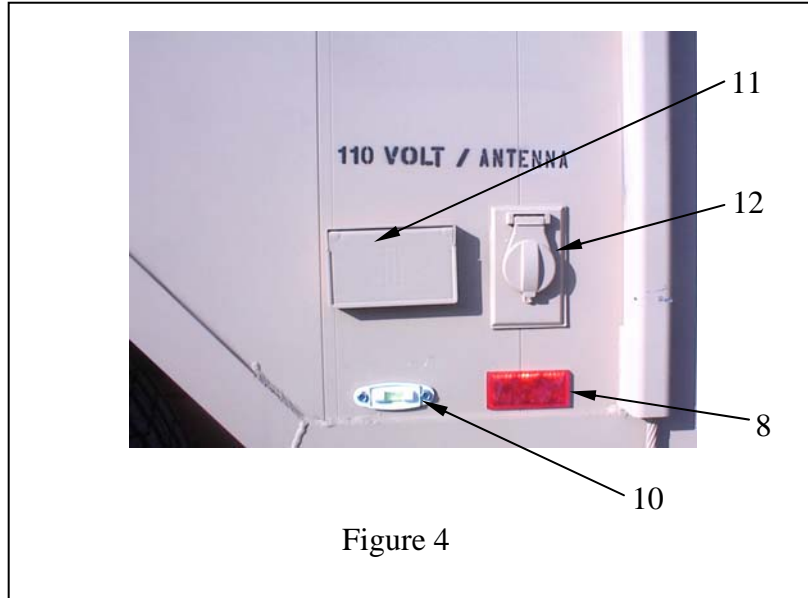


Figure 2

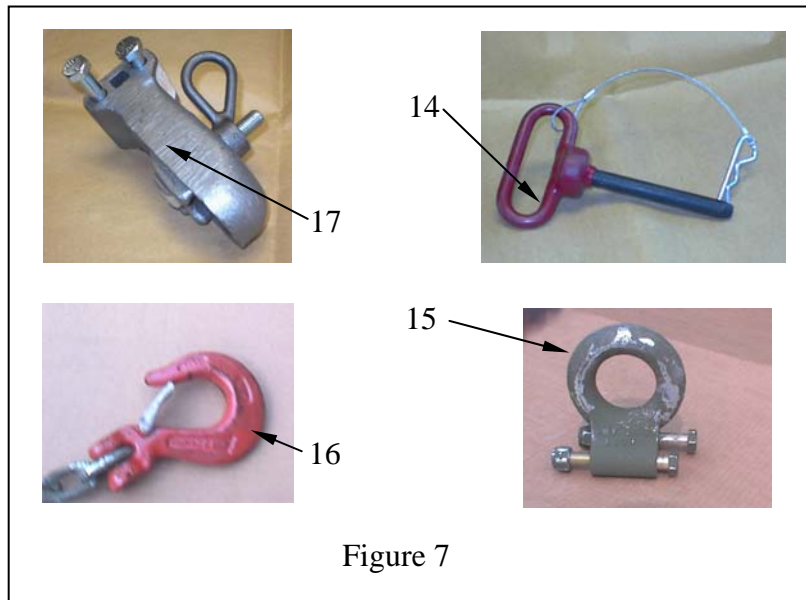
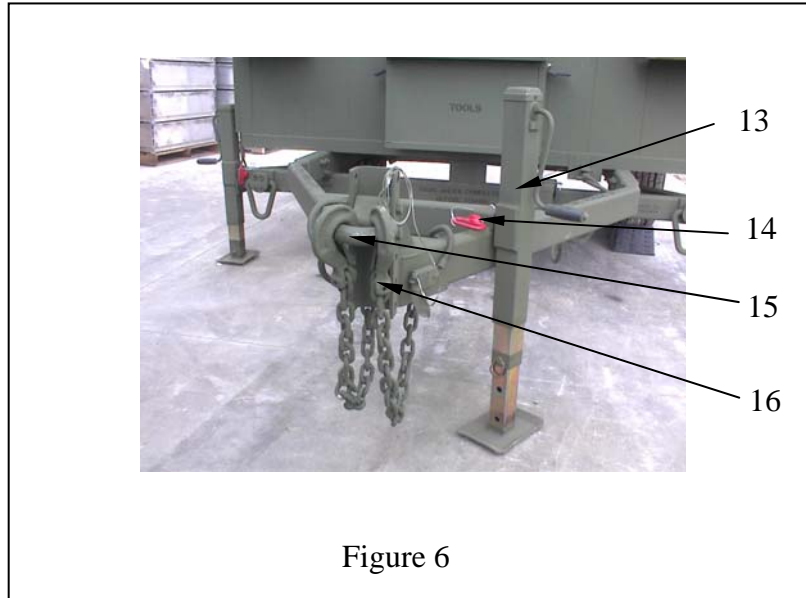
DESCRIPTION	PART NO.	QTY.
5) TAILLIGHT – TURN SIGNAL W/ GASKET 12V	MT2080	2
6) FOLDING HAND GRIP/STEP W/ HARDWARE	MT3076	3
7) CLEVIS TIE DOWN – 20,000# W/ HARDWARE	MT3020	4



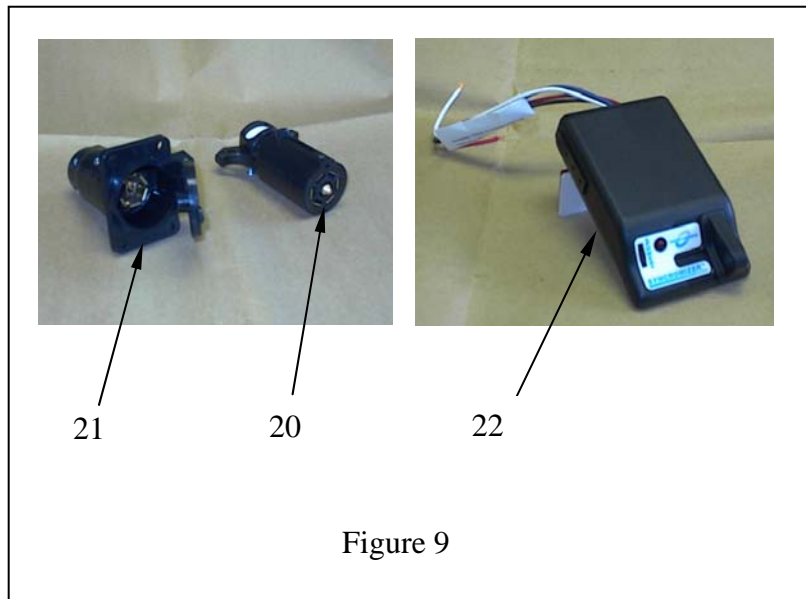
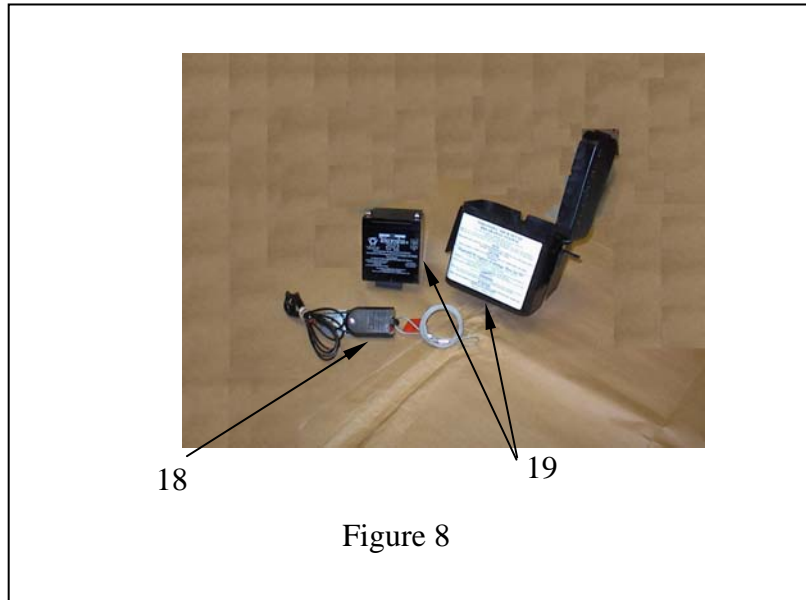
DESCRIPTION	PART NO.	QTY.
8) SIDE REFLECTOR – RED	MT2021	2
9) SIDE REFLECTOR – AMBER	MT2020	2
10) BUBBLE LEVEL W/ HARDWARE	MT2030	4
11) 110 VOLT SOCKET ASSEMBLY	MT3101	1
12) ANTENNA INLET COVER	MT3102	1



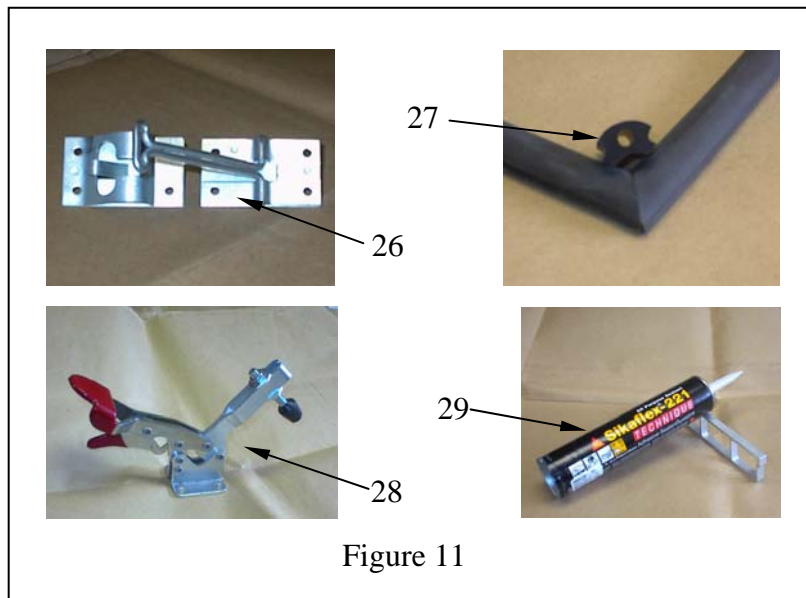
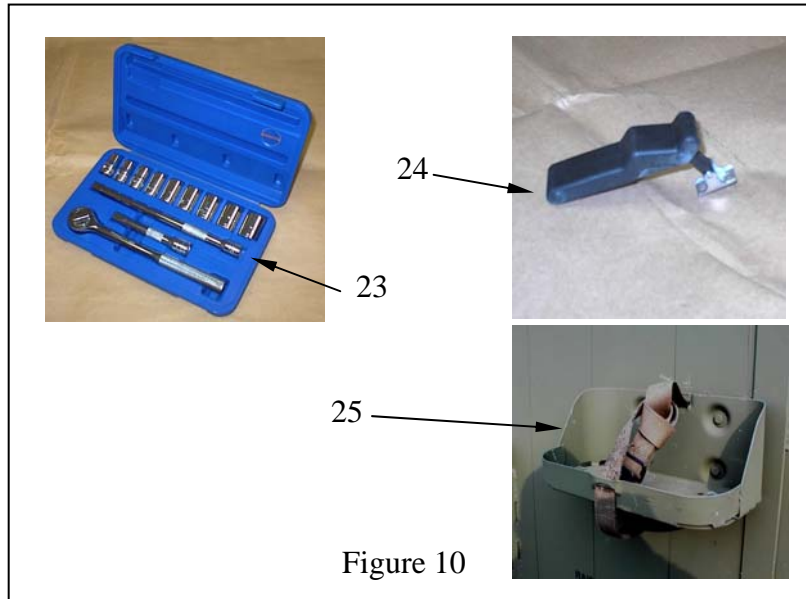
DESCRIPTION	PART NO.	QTY.
13) STABILIZING JACK / TONGUE JACK	MT3201	5
14) JACK RETAINING PIN	MT3202	5
15) PINTLE HITCH LUNETTE EYE W/ HARDWARE	MT3301	1
16) SAFETY CHAIN HOOK	MT3303	2
17) BALL COUPLER – 2”BALL W/ HARDWARE	MT3302	1



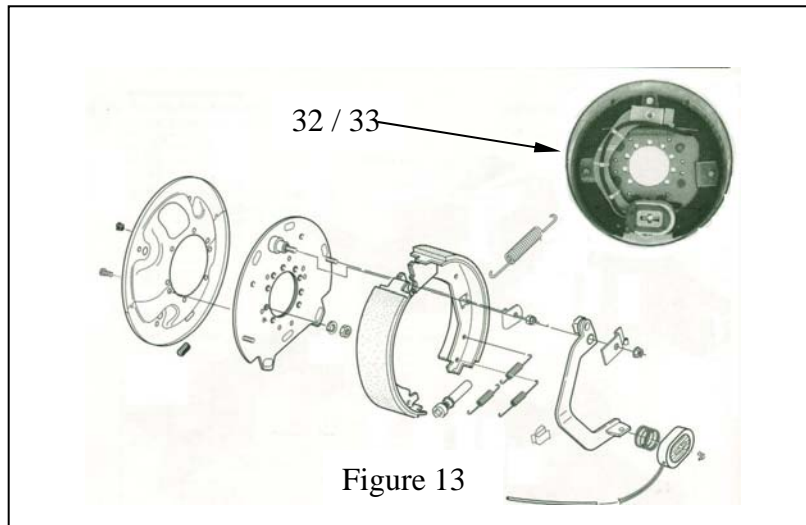
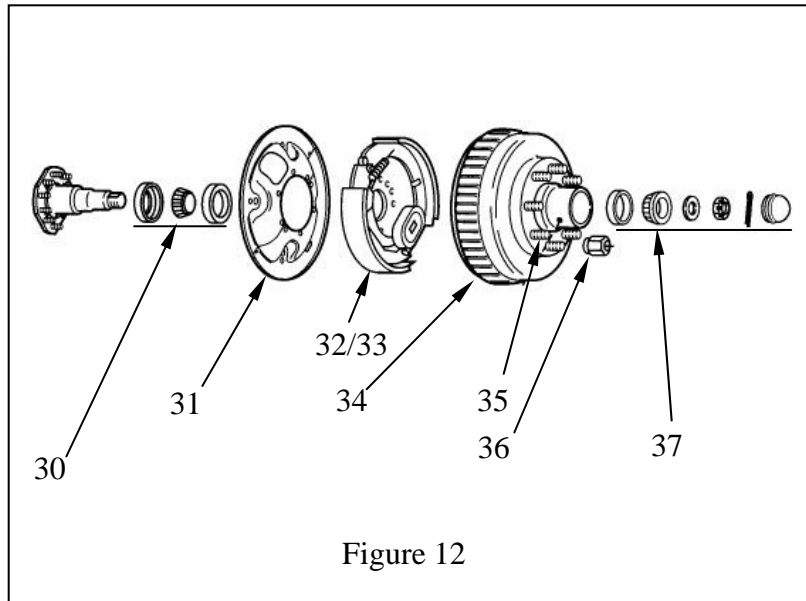
DESCRIPTION	PART NO.	QTY.
18) SAFETY BRAKE – BREAK AWAY SWITCH	MT4001	1
19) SAFETY BRAKE BATTERY BOX AND BATTERY	MT4002	1
(NOT SHOWN) SAFETY BRAKE BATTERY CHARGER	MT4003	1
20) R.V. ELECTRICAL CONNECTOR 7-PIN MALE	MT4101	1
21) R.V. ELECTRICAL CONNECTOR 7-PIN FEMALE	MT4102	1
22) ELECTRIC BRAKE CONTROLLER / SYNCHRONIZER	MT4103	1



DESCRIPTION	PART NO.	QTY.
23) TOOL KIT	MT5001	1
24) TOOL STOWAGE LATCH W/ HARDWARE	MT5002	2
25) JERRY CAN BRACKET W/ HARDWARE	MT3010	2
26) CARGO DOOR RESTRAINT	MT8001	1
27) CARGO DOOR GASKET	MT3202	1
28) HATCH DOOR LATCH	MT3210	2
29) PANEL SEALANT	MT3500	1













DESCRIPTION	PART NO.	QTY.
30) INNER BEARING ASSEMBLY	MT4010	2
31) DUST SHIELD	MT4004	2
32) BRAKE ASSEMBLY RIGHT HAND	MT4100	1
33) BRAKE ASSEMBLY LEFT HAND	MT4200	1
34) BRAKE DRUM WITH STUDS	MT4005	2
35) WHEEL STUDS 9/16 – 18	MT4006	16
36) WHEEL NUTS 9/16 – 18 60° CONE	MT4007	16
37) OUTER BEARING ASSEMBLY	MT4020	2



## Mechanical Specifications for Externally Threaded Fasteners with Grade Markings, ASTM A36 Material Specification, SAE J429 Bolt and Nut Compatibility

### Mechanical Specifications for Externally Threaded Fasteners with Grade Markings

Specification	Material	Size Range (inches)	Min. Proof Strength (psi)	Min. Tensile Strength (psi)	Core Hardness Rockwell		Min. Yield Strength (psi)	Grade Identification Marking
					Min.	Max.		
SAE J429-Grade 1	Low or medium carbon steel	1/4-1-1/2	33,000	60,000	B70	B100	36,000	
SAE J429-Grade 2		1/4-3/4 7/8-1-1/2	55,000 33,000	74,000 60,000	B80 B70	B100 B100	57,000 36,000	
ASTM A307-Grade A	Low or medium carbon steel	1/4-4		60,000	B69 <i>See Note 1</i>			
ASTM A307-Grade B	Low or medium carbon steel	1/4-4		60,000(min) 100,000(max)	B69 <i>See Note 1</i>			
SAE J429-Grade 5	Medium carbon steel quenched & tempered	1/4-1	85,000	120,000	C25	C34	92,000	
ASTM A449-Type 1		1-1/8-1-1/2	74,000	105,000	C19	C30	81,000	
ASTM A449-Type 1 <i>See Note 2</i>		1-3/4-3	55,000	90,000			58,000	
ASTM A325-Type 1	Medium carbon steel quenched & tempered	1/2-1 1-1/8-1-1/2	85,000 74,000	120,000 105,000	C25 C19	C34 C30	92,000 81,000	
					<i>See Note 3</i>			<i>See Note 5</i>
ASTM A354 Grade BC	Medium carbon alloy steel quenched & tempered	1/4-2-1/2 2-1/2-4	105,000 95,000	125,000 115,000	C26 C22	C36 C33	109,000 99,000	
				<i>See Note 2</i>				
ASTM A354 Grade BD	Medium carbon alloy steel quenched & tempered	1/4-2-1/2 2-1/2-4	120,000 105,000	150,000 140,000	C33 C31	C39 C39	130,000 115,000	
					<i>See Note 2</i>			<i>See Note 4</i>
SAE J429-Grade 8	Medium carbon alloy steel quenched & tempered	1/4-1-1/2	120,000	150,000	C33	C39	130,000	
SAE J429-Grade 8 2	Low carbon boron steel quenched & tempered	1/4-1	120,000	150,000	C33	C39	130,000	
ASTM A490-Type 1	Medium carbon alloy steel quenched & tempered	1/2-1-1/2	120,000	150,000(min) 170,000(max)	C33 <i>See Note 3</i>	C38	130,000	
ASTM A574 Socket Head Cap Screw	Low alloy steel quenched & tempered	#0-1/2 over 1/2-2	140,000 135,000	180,000 170,000	C39 C37	C45 C45		

Note 1 No minimum hardness is required on bolts and studs 3 times the diameter and longer

Note 2 Bolts less than 3 times the diameter in length and studs less than 4 times the diameter in length shall have hardness values not less than minimum and not more than maximum

Note 3 Bolts 3 times the diameter in length and over are not required to meet minimum hardness requirements

Note 4 ASTM A354-Grade BD with diameters 1/4" through 2-1/2" shall be marked with the grade symbol "BD" and, in addition may be marked with six radial lines

Note 5 Radial line markings 120 degrees apart are optional

## Torque-Tension Relationships for SAE J429 Grade Bolts

Nominal Thread Size	SAE J429 Grade 2			SAE J429 Grade 5			SAE J429 Grade 8		
	Clamp Load (lbs.)	Tightening Torque		Clamp Load (lbs.)	Tightening Torque		Clamp Load (lbs.)	Tightening Torque	
		K = .15	K = .20		K = .15	K = .20		K = .15	K = .20
<b>Unified Coarse Thread Series</b>									
1/4-20	1,300	49 in-lbs	65 in-lbs	2,000	75 in-lbs	100 in-lbs	2,850	107 in-lbs	143 in-lbs
5/16-18	2,150	101	134	3,350	157	210	4,700	220	305
3/8-16	3,200	15 ft-lbs	20 ft-lbs	4,950	23 ft-lbs	31 ft-lbs	6,950	32.5 ft-lbs	44 ft-lbs
7/16-14	4,400	24	30	6,800	37	50	9,600	53	70
1/2-13	5,850	36.5	49	9,050	57	75	12,800	80	107
9/16-12	7,500	53	70	11,600	82	109	16,400	115	154
5/8-11	9,300	73	97	14,500	113	151	20,300	159	211
3/4-10	13,800	129	173	21,300	200	266	30,100	282	378
7/8-9	11,425	125	166	29,435	321	430	41,550	454	606
1-8	15,000	187.5	250	38,600	482.5	640	54,540	680	900
<b>Unified Fine Thread Series</b>									
1/4-28	1,500	55 in-lbs	75 in-lbs	2,300	85 in-lbs	115 in-lbs	3,250	120 in-lbs	163 in-lbs
5/16-24	2,400	112	150	3,700	173	230	5,200	245	325
3/8-24	3,600	17 ft-lbs	22.5 ft-lbs	5,600	26 ft-lbs	35 ft-lbs	7,900	37 ft-lbs	50 ft-lbs
7/16-20	4,900	27	36	7,550	42	55	10,700	59	78
1/2-20	6,600	41	55	10,200	64	85	14,400	90	120
9/16-18	8,400	59	79	13,000	92	122	18,300	129	172
5/8-18	10,600	83	110	16,300	128	170	23,000	180	240
3/4-16	15,400	144	193	23,800	223	298	33,600	315	420
7/8-14	12,610	138	184	32,480	355	473	45,855	500	668

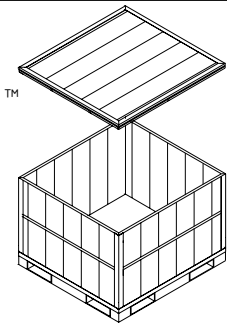
Clamp load estimated as 75% of proof load for specified bolts

Torque values for 1/4 and 5/16 inch series are in inch-pounds. All other torque values are in foot-pounds.

Torque values calculated from formula  $T = KDF$  where:  $K = 0.15$  for "lubricated" conditions and  $K = 0.20$  for "dry" conditions.

PARTS LIST

PART NUMBER	DESCRIPTION	PAGE NUMBER
MT 1620	SPARE TIRE HARDWARE ASSEMBLY	1
MT1610	WHEEL CHOCK SET	1
MT1645	TIRE - LT26575R16LT L.R.E.	1
MT1670	STEEL WHEEL 16X7 - 8 BOLT - 6.50 B.C.	1
MT2020	SIDE REFLECTOR - AMBER	3
MT2021	SIDE REFLECTOR - RED	3
MT2030	BUBBLE LEVEL WITH HARDWARE	3
MT2080	TAILLIGHT - TURN SIGNAL WITH GASKET	2
MT3010	JERRY CAN BRACKET	6
MT3020	CLEVIS TIE DOWN - 20,000# W/ HARDWARE	2
MT3076	FOLDING HAND GRIP/STEP W/ HARDWARE	2
MT3101	110 VOLT SOCKET ASSEMBLY	3
MT3102	ANTENNA INLET COVER	3
MT3111	110V SOCKET-ROUND	NOT SHOWN
MT3112	ANTENNA COVER-ROUND	NOT SHOWN
MT8001	CARGO DOOR RESTRAINT	6
MT3202	JACK RETAINING PIN	4
MT3210	HATCH DOOR LATCH	6
MT3301	PINTLE HITCH LUNETTE EYE W/ HARDWARE	4
MT3302	BALL COUPLER - 2" WITH HARDWARE	4
MT3303	SAFETY CHAIN HOOK	4
MT3500	PANEL SEALANT	6
MT4001	SAFETY BRAKE - BREAK AWAY SWITCH	5
MT4002	SAFETY BRAKE BATTERY BOX AND BATTERY	5
MT4003	SAFETY BRAKE BATTERY CHARGER	NOT SHOWN
MT4004	DUST SHIELD	7
MT4005	BRAKE DRUM WITH STUDS	7
MT4006	WHEEL STUDS 9/16 - 18	7
MT4007	WHEEL NUTS 9/16 - 18	7
MT4010	INNER BEARING ASSEMBLY	7
MT4020	OUTER BEARING ASSEMBLY	7
MT4100	BRAKE ASSEMBLY RIGHT HAND	7
MT4101	R.V. ELECTRICAL CONNECTOR 7-PIN MALE	5
MT4102	R.V. ELECTRICAL CONNECTOR 7-PIN FEMALE	5
MT4103	ELECTRIC BRAKE CONTROLLER / SYNCHRONIZER	5
MT4200	BRAKE ASSEMBLY LEFT HAND	7
MT5001	TOOL KIT	6
MT5002	TOOL KIT LATCH	6
MT7200	CROFT ADJ. ZINC TOW RING	NOT SHOWN
MT8000	CARGO NET	NOT SHOWN
MT3201	STABILIZING JACK	4
MT8002	CARGO DOOR GASKET	6
MT8010	UNIVERSAL LICENSE BRACKET	NOT SHOWN
MT8100	VEHICLE PIG TAIL ASSEMBLY	NOT SHOWN
MT8200	INTERIOR DOME LIGHT	NOT SHOWN



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**PARTS ORDER FORM  
 SPEARR MEDICAL TRAILER**

**METHOD OF PAYMENT**

- PURCHASE ORDER
- CREDIT CARD
- ELECTRONIC TRANSFER

NAME \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_  
 \_\_\_\_\_

SHIPPING ADDRESS \_\_\_\_\_  
 \_\_\_\_\_

TELEPHONE \_\_\_\_\_

CREDIT CARD NUMBER \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_

CARDHOLDER NAME \_\_\_\_\_

CARDHOLDER SIGNATURE \_\_\_\_\_

ITEM	PART NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE	AMOUNT
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

**NOTES:**

SPECIFY COLOR OF TRAILER WHEN ORDERING TAN / GREEN

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**PARTS TOTAL**     \$ \_\_\_\_\_