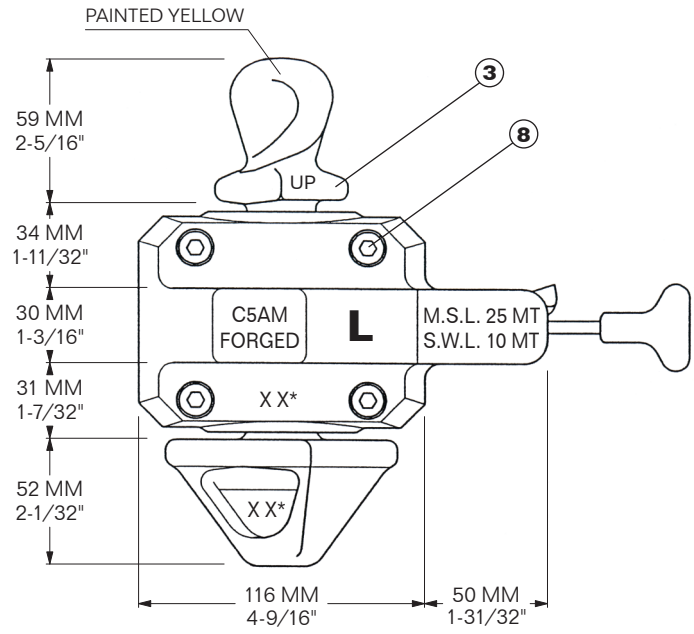
SEMI-AUTOMATIC TWISTLOCK

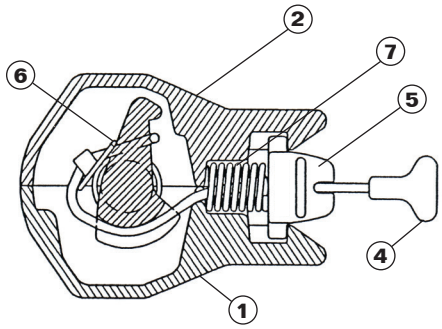
DUAL FUNCTION, LIFTLOCK CERTIFIED

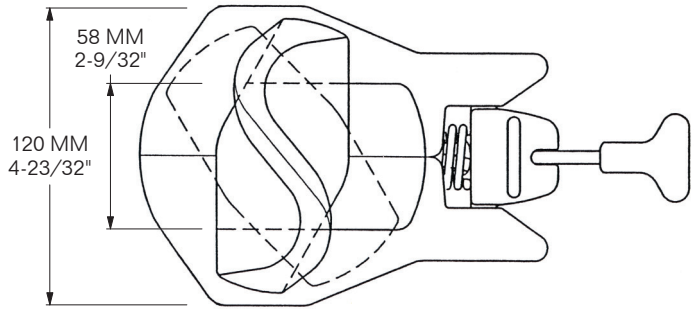
MACGREGOR ALLSET

MODEL 5002-C5AM-DF

FORGED HOUSING







Assembled w/ 4 ea. Cap Screws; Bolts to be tightened to 26.6 Nm.

MIN. B.L. TENSION: 500 kN
MIN. B.L. SHEAR: 420 kN
MIN. B.L. COMPRESSION: 2,000 kN

MAX.SECURING LOAD (MSL):
25 M. Ton (based on safety factor of 2:1)

FINISH: HOT-DIP GALVANIZED (HDG)
WEIGHT: 7 Kg / 15.4 LBS w/ 8 MM BOLTS

* XX = YEAR & MONTH NUMBERS

APM #344990

	SAFETY FACTOR	WLL
FOR LIFT	5 : 1	10 M. Ton
FOR LASHING	2 : 1	25 M. Ton

ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT	
1A	1	**5002-C5AM-DF-1/8-1181540**	HOUSING HALF, LEFT for 8 MM bolts	1.8 Kg	3.95 LBS
1B	1	**5002-C5AM-DF-1/10** (1131112)	HOUSING HALF, LEFT for 10 MM bolts	2.01 Kg	4.43 LBS
2A	1	**5002-C5AM-DF-2/8-1181541**	HOUSING HALF, RIGHT for 8 MM bolts (threaded)	1.8 Kg	3.95 LBS
2B	1	**5002-C5AM-DF-2/10** (1131112)	HOUSING HALF, RIGHT for 10 MM bolts (threaded)	1.95 Kg	4.3 LBS
3 & 6	1	**5002-C5AM-DF-3-6-1120918**	STEM w/ TWIST SPRING	2.77 Kg	6.1 LBS
4	1	**5002-C5AM-DF-4-1120921**	WIRE HANDLE	0.12 Kg	0.27 LBS
5	1	**5002-C5AM-DF-5-1120917**	HANDLE GUIDE	0.11 Kg	0.3 LBS
7	1	**5002-C5AM-DF-7-1120913**	COMPRESSION SPRING	0.05 Kg	0.11 LBS
8A	4	**5002-C5AM-DF-8-1120912**	CAP SCREW, 8 x 45	0.09 Kg	0.2 LBS
8B	4	**5002-C5AM-DF-8-9-1198376**	CAP SCREW, 10 x 45	0.12 Kg	0.26 LBS

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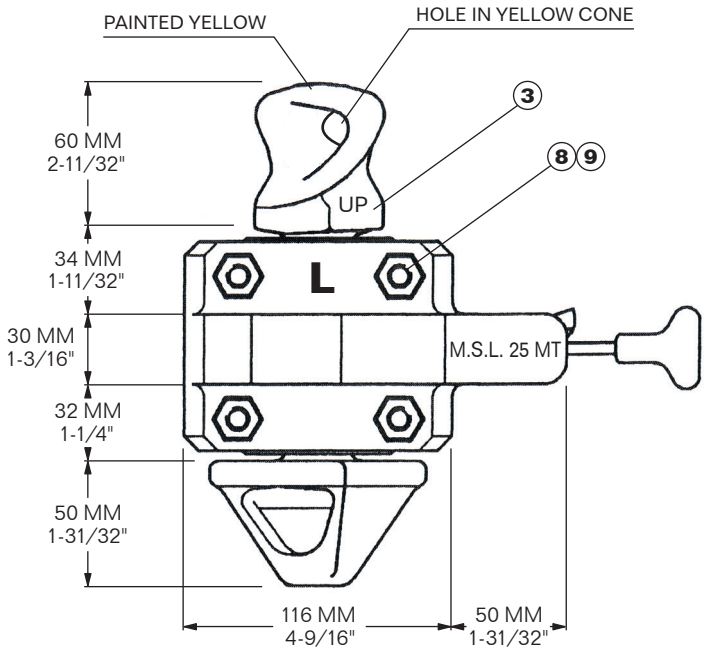
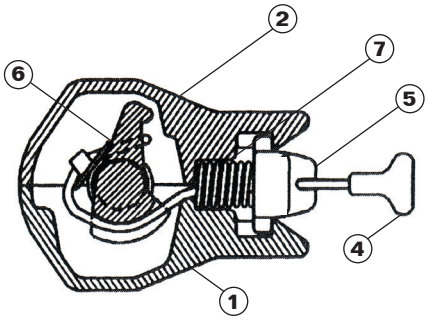
SEMI-AUTOMATIC TWISTLOCK
DUAL FUNCTION

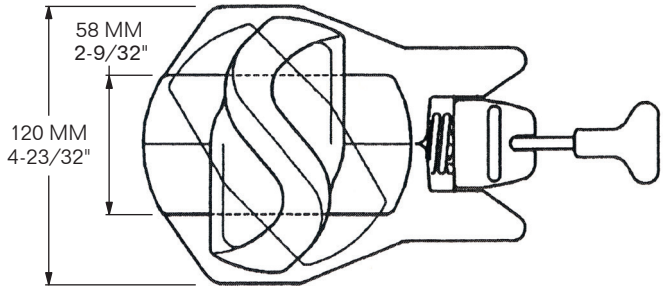
MACGREGOR ALLSET

MODEL 5002-C5AM/DF
CAST STEEL HOUSING





Assembled w/ 4 ea. Hex Bolts & Nuts; Bolts to be tightened to 74 Nm.



MIN. B.L. TENSION: 500 kN
MIN. B.L. SHEAR: 420 kN
MIN. B.L. COMPRESSION: 2,000 kN

MAX. SECURING LOAD (MSL):
25 M. Ton (based on safety factor of 2:1)

FINISH: HOT-DIP GALVANIZED (HDG)
WEIGHT: 5.86 Kg / 12.93 LBS

ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT	
1	1	**5002-C5AM/DF-1/10**	HOUSING HALF, LEFT w/ HEX NUT CAVITY	1.48 Kg	3.26 LBS
2	1	**5002-C5AM/DF-2/10**	HOUSING HALF, RIGHT	1.37 Kg	3.02 LBS
3 & 6	1	**5002-C5AM/DF-3/6**	STEM KIT w/ TWIST SPRING	2.77 Kg	6.1 LBS
4	1	**5002-C5AM/DF-4**	WIRE HANDLE	0.12 Kg	0.27 LBS
5	1	**5002-C5AM/DF-5**	HANDLE GUIDE	0.11 Kg	0.3 LBS
7	1	**5002-C5AM/DF-7**	COMPRESSION SPRING	0.05 Kg	0.11 LBS
8	4	**5002-4744-G12.9**	HEX BOLT, M10 x 40	0.04 Kg	0.09 LBS
9	4	**1110-4521**	HEX NUT, M10 w/ NYLON INSERT	0.01 Kg	0.02 LBS

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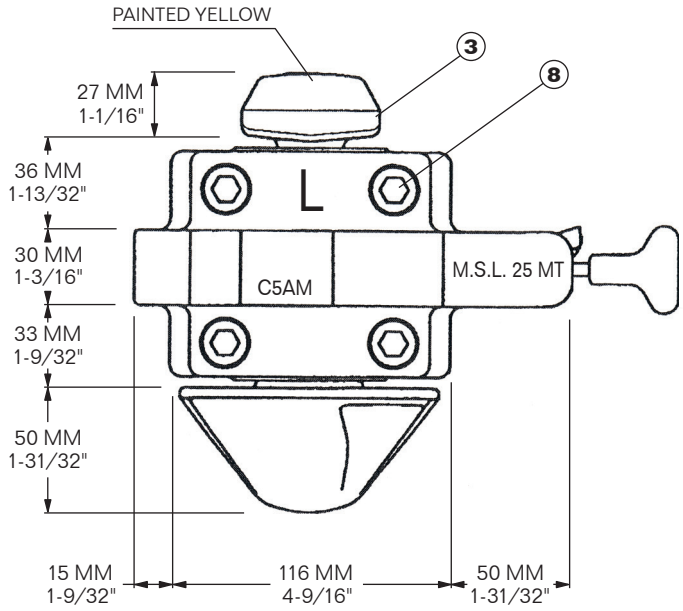
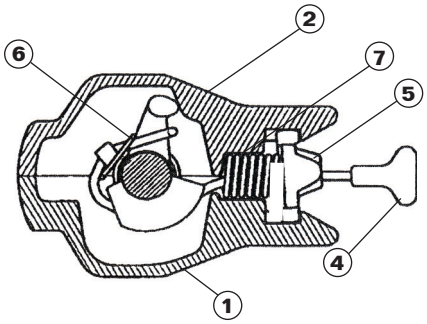
SEMI-AUTOMATIC TWISTLOCK
SINGLE FUNCTION

MACGREGOR ALLSET

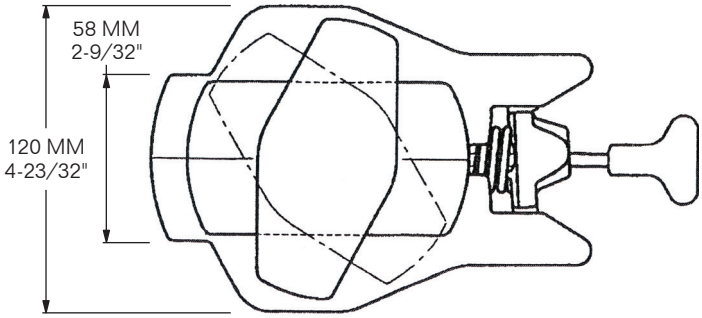
DISCONTINUED;
Shown for spare parts only.

MODEL 5002-C5AM
FORGED HOUSING





Assembled w/ 4 ea. Cap Screws;
Bolts to be tightened to 47 Nm.



MIN. B.L. TENSION: 500 kN
MIN. B.L. SHEAR: 420 kN
MIN. B.L. COMPRESSION: 2,000 kN

MAX. SECURING LOAD (MSL):
25 M. Ton (based on safety factor of 2:1)

FINISH: HOT-DIP GALVANIZED (HDG)
WEIGHT: 6.8 Kg / 15 LBS

ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT	
1	1	**5002-C5AM-DF-1/10**	HOUSING HALF, LEFT	1.95 Kg	4.3 LBS
2	1	**5002-C5AM-DF-2/10**	HOUSING HALF, RIGHT, THREADED	1.95 Kg	4.3 LBS
3 & 6	1	**5002-C5AM-3-6**	STEM w/ TWIST SPRING	2.31 Kg	5.1 LBS
4	1	**5002-C5AM-DF-4**	WIRE HANDLE	0.12 Kg	0.27 LBS
5	1	**5002-C5AM-5**	HANDLE GUIDE	0.1 Kg	0.22 LBS
7	1	**5002-C5AM-DF-7**	COMPRESSION SPRING	0.05 Kg	0.11 LBS
8	4	**5002-C5AM-DF-8-9**	HEX BOLT, M10 x 45	0.12 Kg	0.26 LBS

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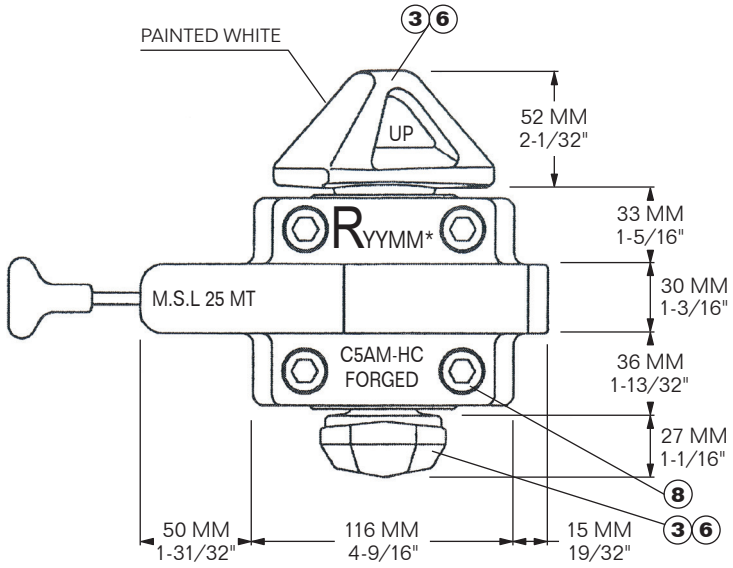
SEMI-AUTOMATIC TWISTLOCK

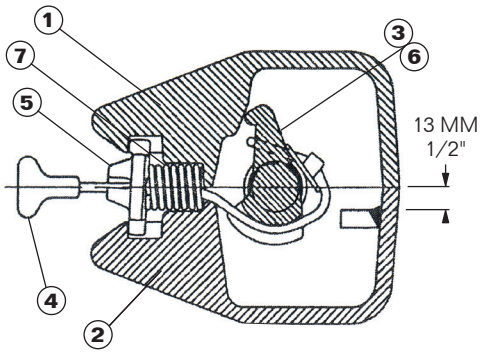
SINGLE FUNCTION, FOR HATCH COVER

MACGREGOR ALLSET

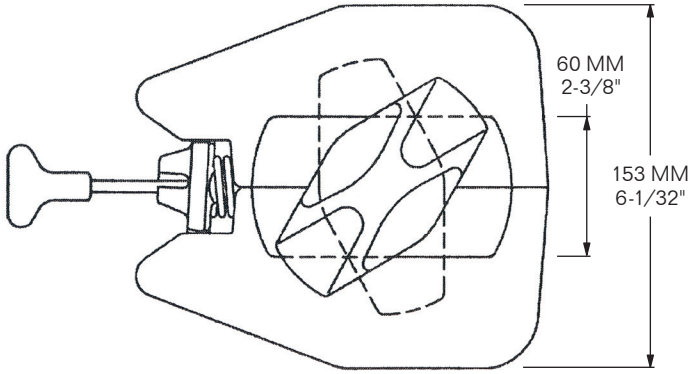
MODEL 5002-C5AM-HC-1120909

MAERSK TYPE, FORGED HOUSING





Assembled w/ 4 ea. Cap Screws; Bolts to be tightened to 74 Nm.



MIN. B.L. TENSION: 500 kN
MIN. B.L. SHEAR: 420 kN
MIN. B.L. COMPRESSION: 2,000 kN

MAX. SECURING LOAD (MSL):
25 M. Ton (based on safety factor of 2:1)

FINISH: HOT-DIP GALVANIZED (HDG)
WEIGHT: 7.26 Kg / 16 LBS

* YYMM = YEAR & MONTH NUMBERS

ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT	
1	1	**5002-C5AM-HC-1-400027347**	HOUSING HALF, LEFT, THREADED	2.68 Kg	5.9 LBS
2	1	**5002-C5AM-HC-2-400027348**	HOUSING HALF, RIGHT	2.68 Kg	5.9 LBS
3 & 6	1	**5002-C5AM-HC-3-6**	STEM w/ TWIST SPRING	2.31 Kg	5.1 LBS
4	1	**5002-C5AM-DF-4**	WIRE HANDLE	0.12 Kg	0.27 LBS
5	1	**5002-C5AM-DF-5**	HANDLE GUIDE	0.1 Kg	0.22 LBS
7	1	**5002-C5AM-DF-7**	COMPRESSION SPRING	0.05 Kg	0.11 LBS
8	4	**5002-C5AM-DF-8-9-1198376**	CAP SCREW, 10 x 45	0.12 Kg	0.26 LBS

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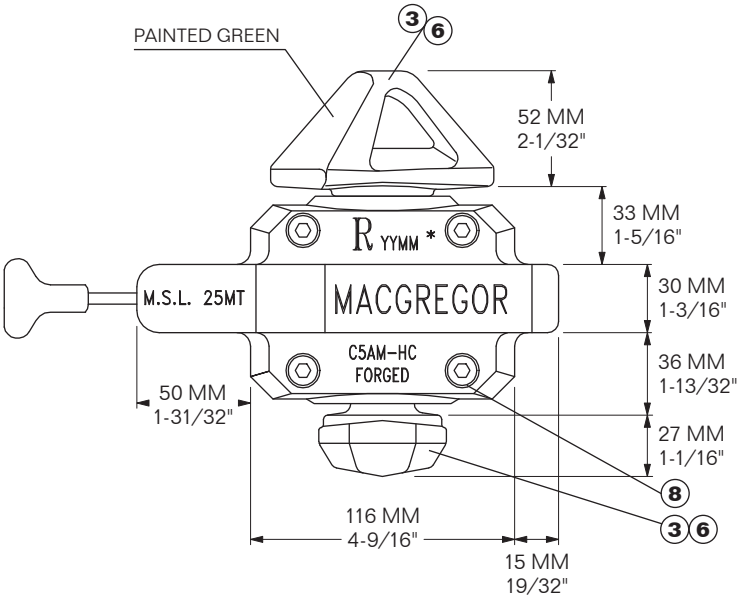
SEMI-AUTOMATIC TWISTLOCK

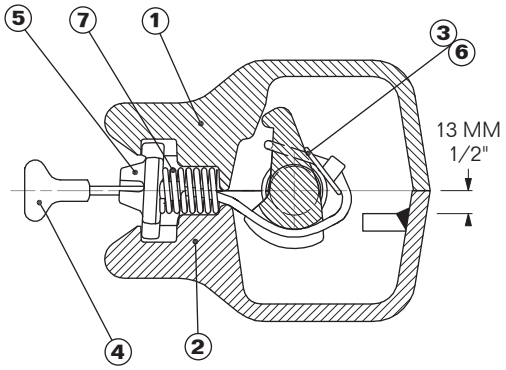
SINGLE FUNCTION, FOR HATCH COVER

MACGREGOR ALLSET

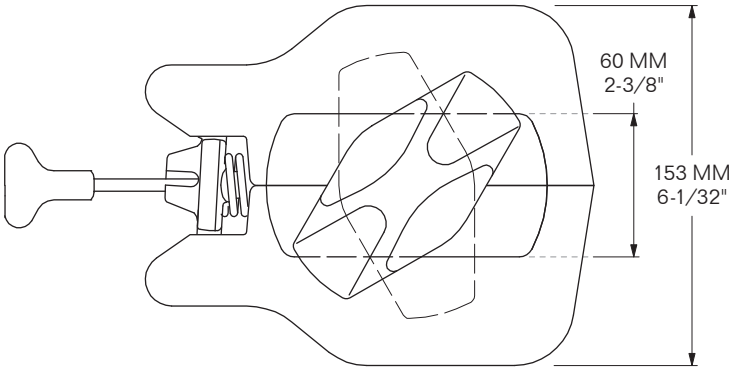
MODEL 5002-C5AM-HC-1120911

STANDARD TYPE, FORGED HOUSING





Assembled w/ 4 ea. Cap Screws; Bolts to be tightened to 74 Nm.



MIN. B.L. TENSION: 500 kN
MIN. B.L. SHEAR: 420 kN
MIN. B.L. COMPRESSION: 2,000 kN

MAX. SECURING LOAD (MSL):
25 M. Ton (based on safety factor of 2:1)

FINISH: HOT-DIP GALVANIZED (HDG)
WEIGHT: 7.26 Kg / 16 LBS

* YYMM = YEAR & MONTH NUMBERS

ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT	
1	1	**5002-C5AM-HC-1-400027345**	HOUSING HALF, LEFT, THREADED	2.68 Kg	5.9 LBS
2	1	**5002-C5AM-HC-2-400027346**	HOUSING HALF, RIGHT	2.68 Kg	5.9 LBS
3 & 6	1	**5002-C5AM-HC-3-6**	STEM w/ TWIST SPRING	2.31 Kg	5.1 LBS
4	1	**5002-C5AM-DF-4**	WIRE HANDLE	0.12 Kg	0.27 LBS
5	1	**5002-C5AM-DF-5**	HANDLE GUIDE	0.1 Kg	0.22 LBS
7	1	**5002-C5AM-DF-7**	COMPRESSION SPRING	0.05 Kg	0.11 LBS
8	4	**5002-C5AM-DF-8-1120912**	CAP SCREW, 8 x 45	0.1 Kg	0.22 LBS

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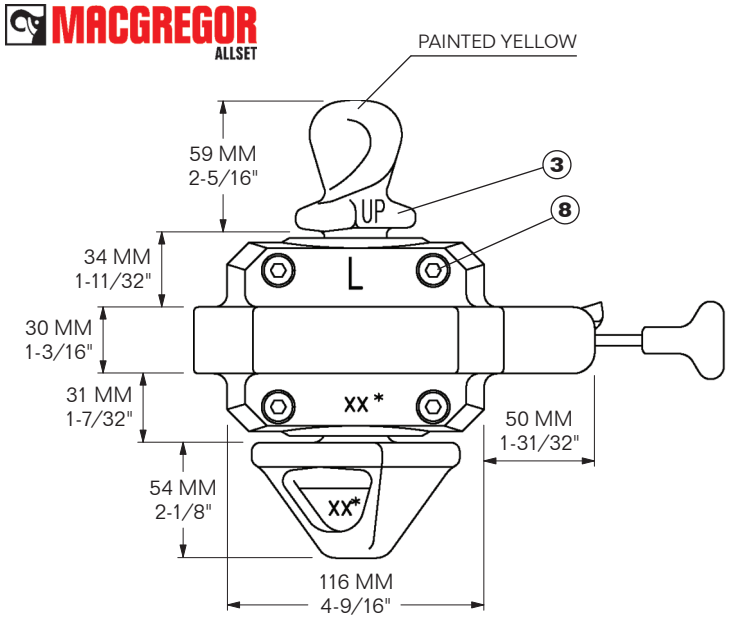
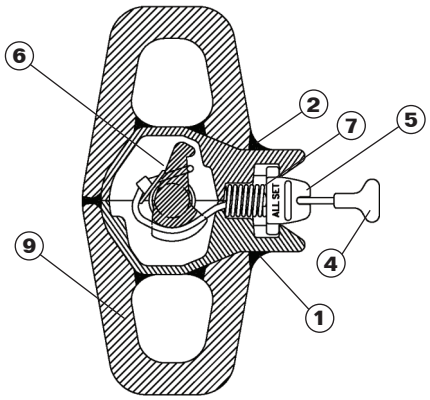
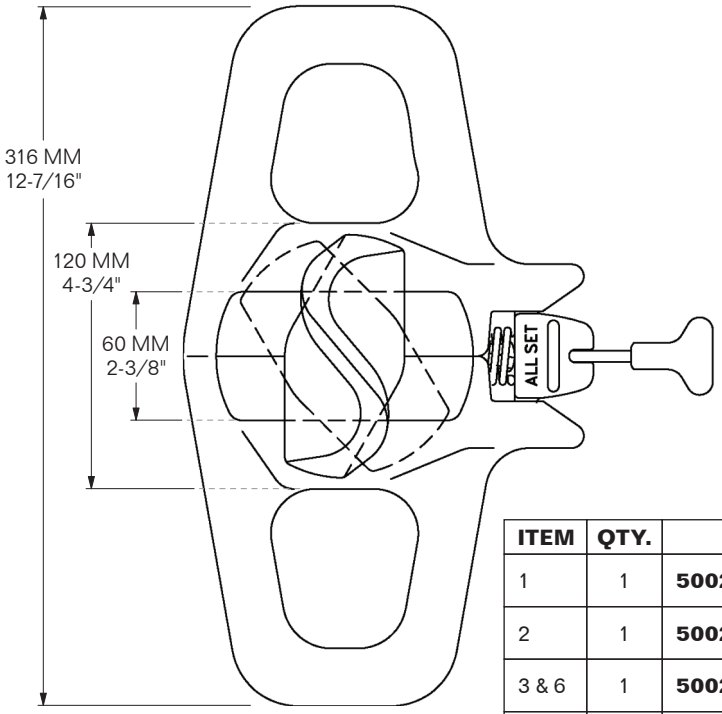
SEMI-AUTOMATIC TWISTLOCK
FOR 102" WIDE CONTAINERS

MACGREGOR ALLSET

MODEL 5002-C5AM-DF/W
FORGED HOUSING







Assembled w/ 4 ea. Cap Screws; Bolts to be tightened to 74 Nm.

MIN. B.L. TENSION: 500 kN
MIN. B.L. SHEAR: 420 kN
MIN. B.L. COMPRESSION: 2,000 kN

MAX. SECURING LOAD (MSL):
25 M. Ton (based on safety factor of 2:1)

FINISH: HOT-DIP GALVANIZED (HDG)
WEIGHT: 10 Kg / 22.05 LBS

* XX = YEAR & MONTH NUMBERS

ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT
1	1	**5002-C5AM-DF/W-1/8**	HOUSING HALF, LEFT	3.2 Kg 7.1 LBS
2	1	**5002-C5AM-DF/W-2/8**	HOUSING HALF, RIGHT, THREADED	3.2 Kg 7.1 LBS
3 & 6	1	**5002-C5AM-DF-3-6**	STEM w/ TWIST SPRING	2.7 Kg 6.1 LBS
4	1	**5002-C5AM-DF-4**	WIRE HANDLE	0.1 Kg 0.3 LBS
5	1	**5002-C5AM-5**	HANDLE GUIDE	0.1 Kg 0.3 LBS
7	1	**5002-C5AM-DF-7**	COMPRESSION SPRING	0.05 Kg 0.1 LBS
8	4	**5002-C5AM-DF-8**	CAP SCREW, 8 x 45	0.1 Kg 0.2 LBS

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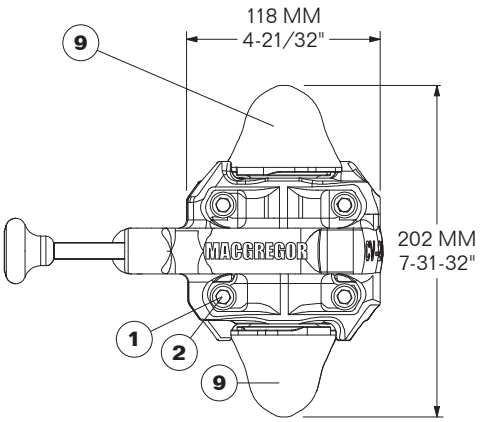
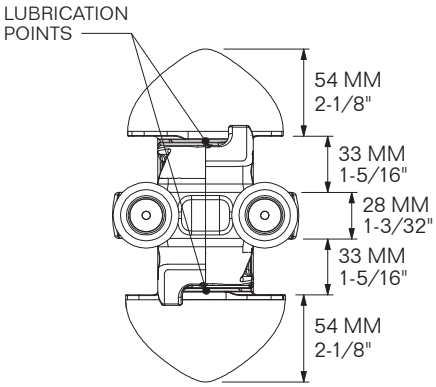
MACGREGOR ALLSET

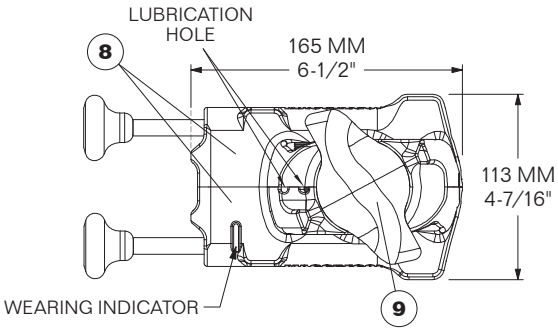
MODEL 5002-CV-20-F
FORGED STEM SAP 1237596

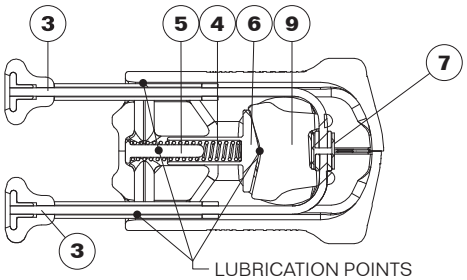
SPECIAL ORDER ONLY

MODEL 5002-CV-20L-F
LIFTLOCK w/ FORGED STEM
SAP 1281325









5002-CV-20L-F

Liftlock certified for VTL up to 10 metric tons SWL per lock. 100% proofloaded to 20 metric tons. **Available as SPECIAL ORDER ONLY.**

	SAFETY FACTOR	WLL
FOR LIFT	5 : 1	10 M. Ton
FOR LASHING	2 : 1	25 M. Ton

	SWL	PL	MBS
TENSION, kN	250	375	500
SHEAR, kN	210	315	420
COMPRESSION, kN	1,000	1,250	2,000

ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT / EA.
1	4	**5002-CV-20-1033080**	Socket Head Cap Screw, M10	0.03 Kg / 0.07 LBS
2	4	**1110-4521**	Hex Nut w/ Nylon Insert (1080141)	0.01 Kg / 0.02 LBS
3	2	**5002-CV-20-1093159**	Wire Handle, Stainless Steel	0.06 Kg / 0.14 LBS
4	1	**5002-CV-20-1010778**	Compression Spring, Stainless Steel	0.02 Kg / 0.04 LBS
5	1	**5002-CV-20-1010781**	Stabilizer/Spring Guide, Plastic	0.01 Kg / 0.01 LBS
6	1	**5002-CV-20-1010776**	Pressure Element, Plastic	0.01 Kg / 0.03 LBS
7	1	**5002-CV-20-1066028**	Hose/Tube Cover, 7/8" x 9/16", Plastic	0.01 Kg / 0.01 LBS
8	2	**5002-CV-20-400020444**	Housing Half, Non-handed	1.4 Kg / 3.08 LBS
9	1	**5002-CV-20-1242663**	Stem/Shaft, Forged Steel	2 Kg / 4.41 LBS

FINISH: HOT-DIP GALVANIZED (HDG) **WEIGHT:** 5.2 Kg / 11.5 LBS

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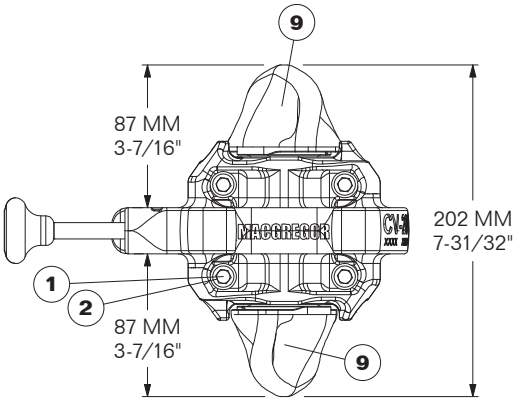
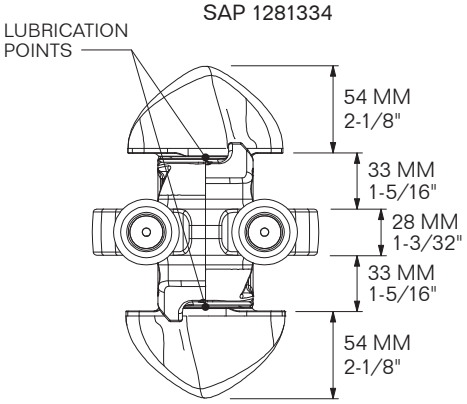
SEMI-AUTOMATIC TWISTLOCK
DUAL-FUNCTION

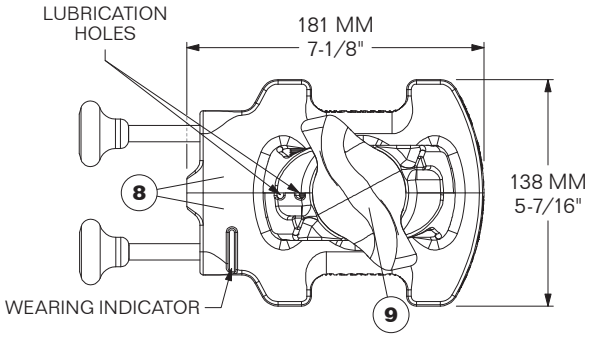
MACGREGOR ALLSET

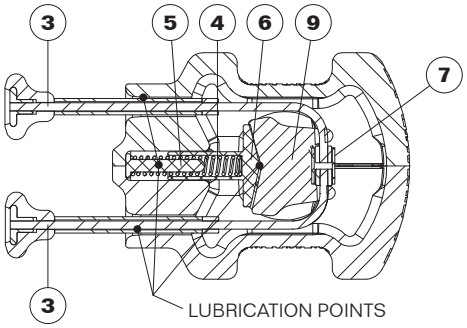
MODEL 5002-CV-20G-F
FORGED STEM SAP 1238334

SPECIAL ORDER ONLY **MODEL 5002-CV-20G-L-F**
LIFTLOCK w/ FORGED STEM
SAP 1281334









5002-CV-20G-L-F

Liftlock certified for VTL up to **10** metric tons SWL per lock. 100% proofloaded to **25** metric tons. **Available as SPECIAL ORDER ONLY.**

	SAFETY FACTOR	WLL
FOR LIFT	5 : 1	10 M. Ton
FOR LASHING	2 : 1	25 M. Ton

	SWL	PL	MBS
TENSION, kN	250	375	500
SHEAR, kN	210	315	420
COMPRESSION, kN	1,150	1,438	2,000

ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT / EA.
1	4	**5002-CV-20-1033080**	Socket Head Cap Screw, M10	0.03 Kg / 0.07 LBS
2	4	**1110-4521**	Hex Nut w/ Nylon Insert (1080141)	0.01 Kg / 0.02 LBS
3	2	**5002-CV-20-1093159**	Handle, Stainless Steel	0.06 Kg / 0.14 LBS
4	1	**5002-CV-20-1010778**	Compression Spring, Stainless Steel	0.02 Kg / 0.04 LBS
5	1	**5002-CV-20-1010781**	Stabilizer/Spring Guide, Plastic	0.01 Kg / 0.01 LBS
6	1	**5002-CV-20-1010776**	Pressure Element, Plastic	0.01 Kg / 0.03 LBS
7	1	**5002-CV-20-1066028**	Hose/Tube Cover, 7/8" x 9/16", Plastic	0.01 Kg / 0.01 LBS
8	2	**5002-CV-20-K104796**	Housing Half, Non-handed	1.83 Kg / 4.04 LBS
9	1	**5002-CV-20-1242663**	Stem/Shaft, Forged Steel	2 Kg / 4.41 LBS

FINISH: HOT-DIP GALVANIZED (HDG) **WEIGHT:** 6 Kg / 13.2 LBS

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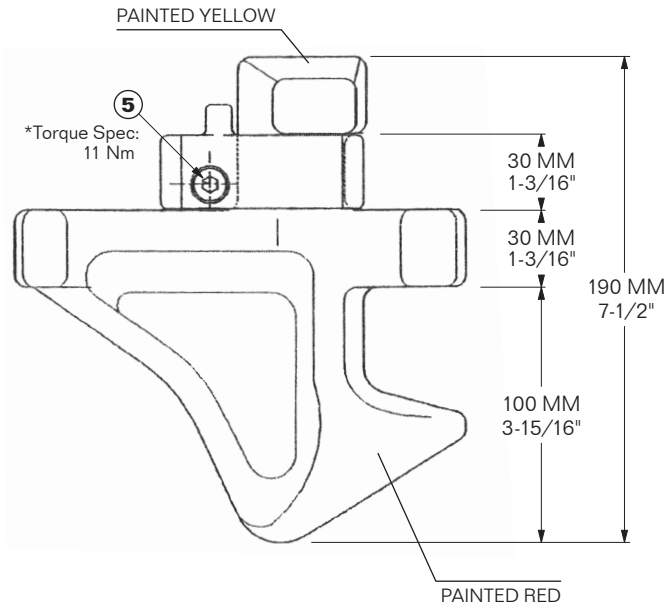
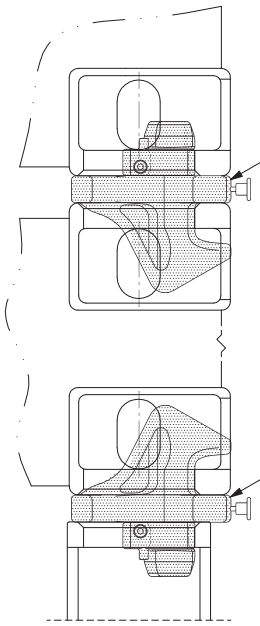
MIDLOCK

FOR 20' ISO GAP & LASHING GAP ON DECK

MACGREGOR ALLSET

MODEL 5002-C19A
FORGED STEEL

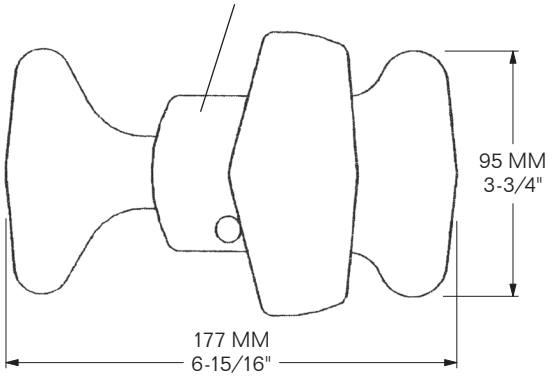




NOTE:
Second Tier
and up must be
fitted on Dock.

NOTE:
First Tier Midlocks must
be installed on Deck w/
Cone up and Red Hook
Beak pointing out.

BEFORE INSTALLING: Twist Shearblock to be parallel with head. Push up into Container Casting and twist Midlock 1/4 turn to lock (shown in Hanging Position).



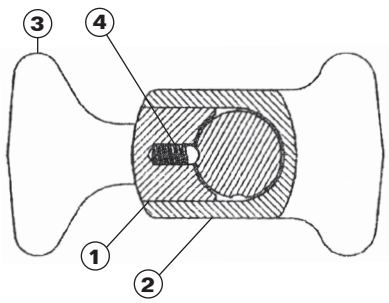
MIN. B.L. TENSION: 490 kN
MIN. B.L. SHEAR: 420 kN
MIN. B.L. COMPRESSION: 1,000 kN

MAX. SECURING LOAD (MSL):
25 M. Ton (based on safety factor of 2:1)

FINISH: HOT-DIP GALVANIZED (HDG)
WEIGHT: 6.1 Kg / 13.5 LBS

* XX = YEAR & MONTH NUMBERS

APM #335652



ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT	
1	1	**5002-C19A-2**	Shearblock (Inner) w/ Thread	0.3 Kg	0.65 LB
2	1	**5002-C19A-3**	Shearblock (Outer)	0.32 Kg	0.7 LB
3	1	**5002-C19A-4**	Detent Ball	0.01 Kg	0.01 LB
4	1	**5002-C19A-5**	Detent Spring	0.01 Kg	0.01 LB
5	1	**5002-C19A-6**	Cap Screw*, M6 x 55mm	0.01 Kg	0.02 LBS

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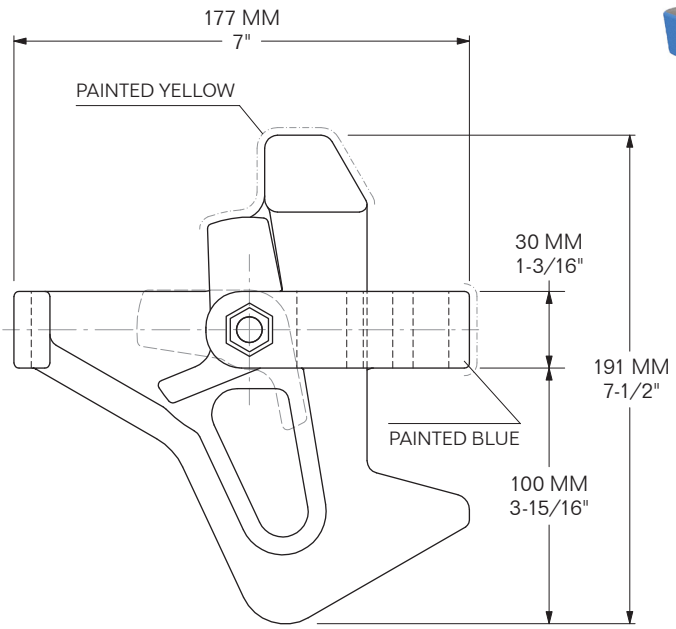
MIDLOCK

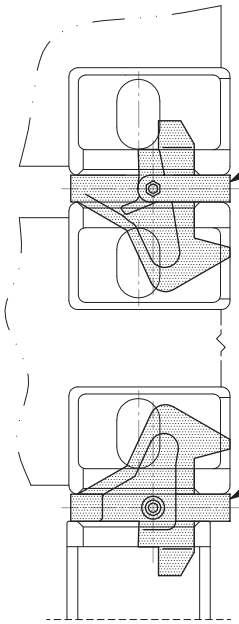
FOR 20' ISO GAP & LASHING GAP ON DECK

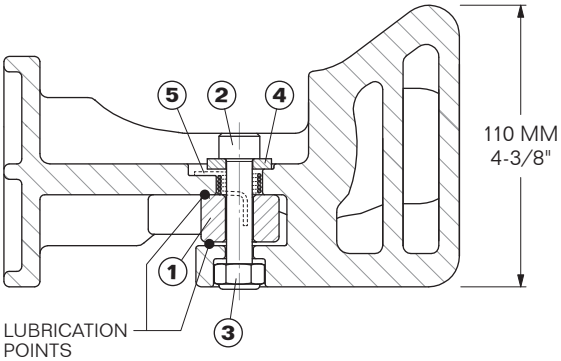
MACGREGOR ALLSET

MODEL 5002-AFC-1L

CAST STEEL HOUSING







MIN. B.L. TENSION: 500 kN
MIN. B.L. SHEAR: 420 kN

MAX. SECURING LOAD (MSL):
25 M. Ton (based on safety factor of 2:1)

FINISH: HOT-DIP GALVANIZED (HDG)
WEIGHT: 5 Kg / 11 LBS

* XX = YEAR & MONTH NUMBERS

MacGregor #1086914

ITEM	QTY.	MODEL	DESCRIPTION	WEIGHT	
1	1	**5002-AFC-1L-1045156**	Latch/Securing Element	0.23 Kg	0.51 LBS
2	1	**5002-AFC-1L-1045154-SS**	Cap Screw Bolt (M10-1.5 x 60mm, stainless steel)	0.1 Kg	0.22 LBS
3	1	**1110-4521**	Hex Nut (self-locking, M10-1.5 x 60mm, zinc-plated)	0.01 Kg	0.01 LBS
4	1	**5002-AFC-1L-1045155**	Washer (1" x 1/2" x 3/32", zinc-plated)	0.01 Kg	0.01 LBS
5	1	**5002-AFC-1L-1045157**	Latch Spring	0.01 Kg	0.01 LBS

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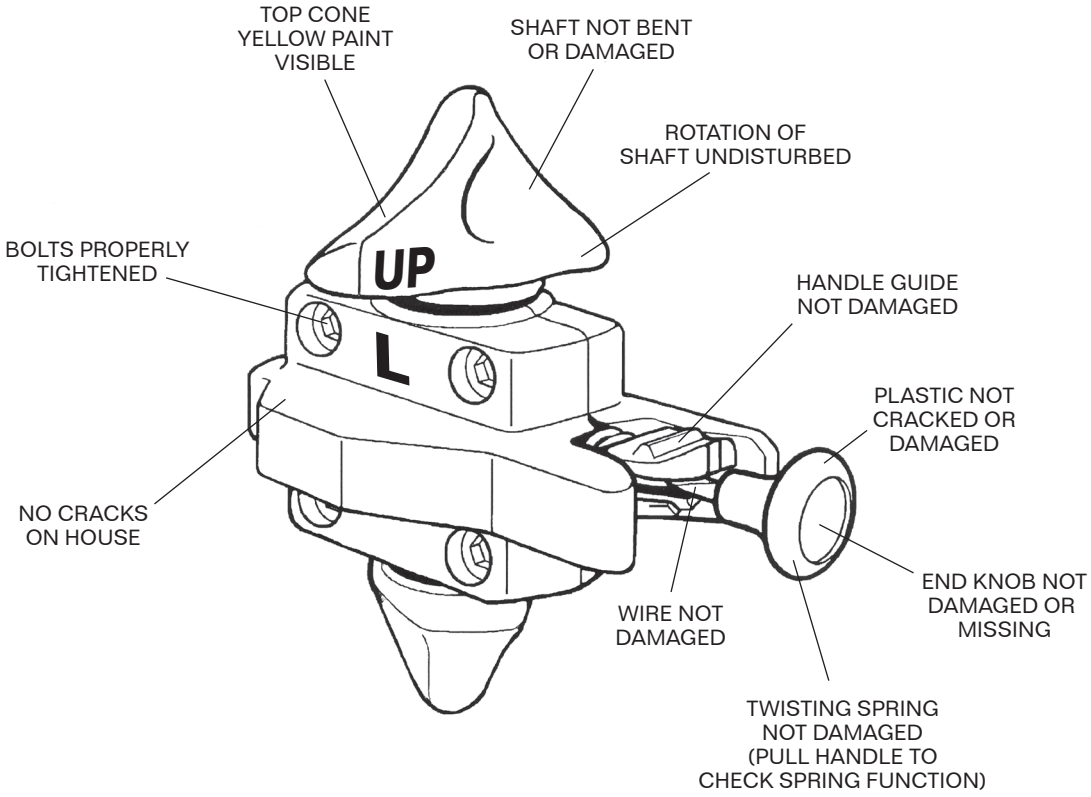
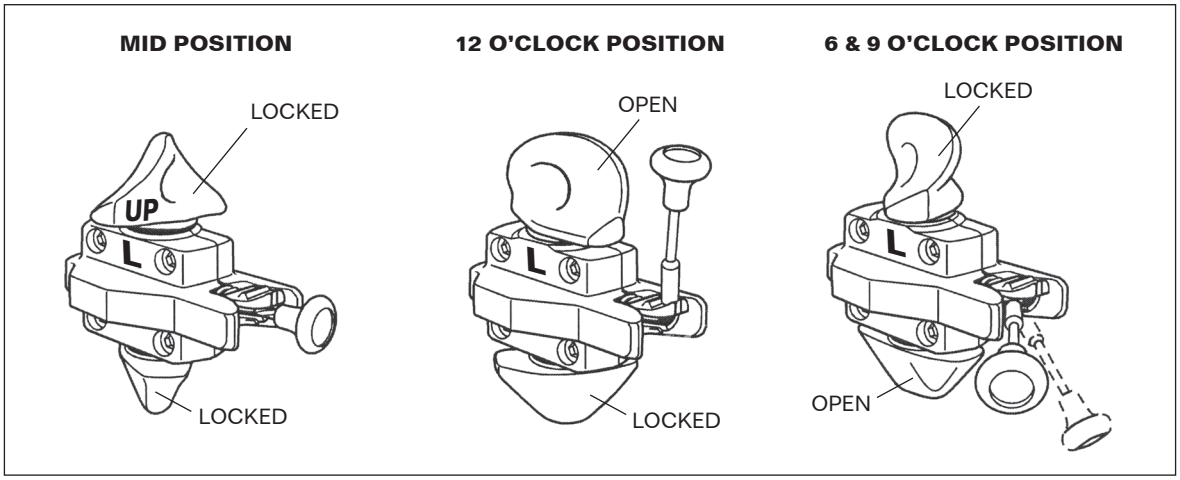
MACGREGOR ALLSET

VISUAL INSPECTION – FUNCTION TEST
(MINIMUM ONCE PER YEAR)



FUNCTION TEST



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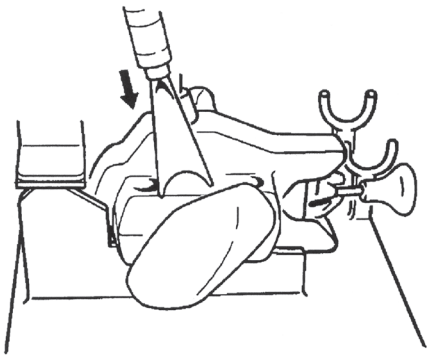
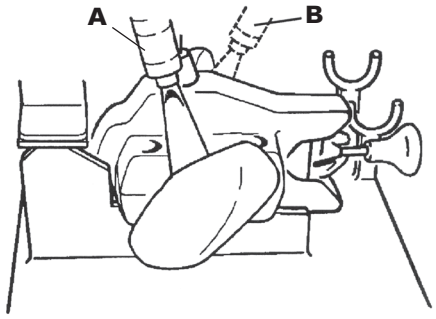
MACGREGOR ALLSET

GREASING
(WHEN REQUIRED, TYPICALLY ONCE PER 18–24 MONTHS)

1

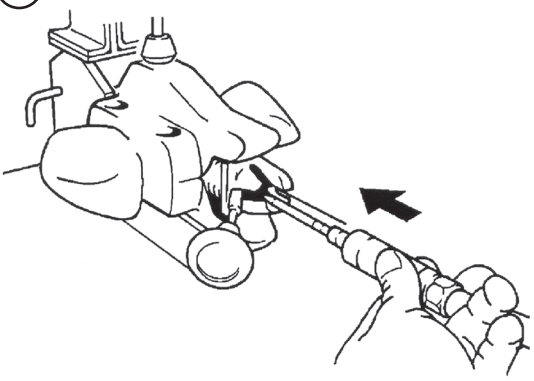


2



1. INSERT THE FLAT SHAFT-NOZZLE BETWEEN THE CONE AND HOUSING.
2. INJECT GREASE AT BOTH POSITIONS: A & B.

3



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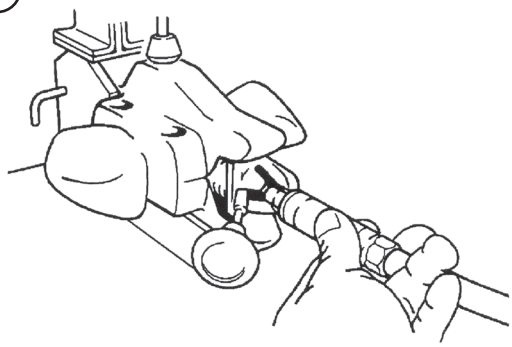

3. INSERT THE NEEDLE-TYPE HANDLE NOZZLE INTO THE HOUSING THROUGH THE HANDLE GUIDE.
4. INJECT GREASE WHILE NOZZLE IS SLOWLY PULLED OUT.
5. REMOVE EXCESSIVE GREASE, AND CARRY OUT THE FUNCTION TEST.

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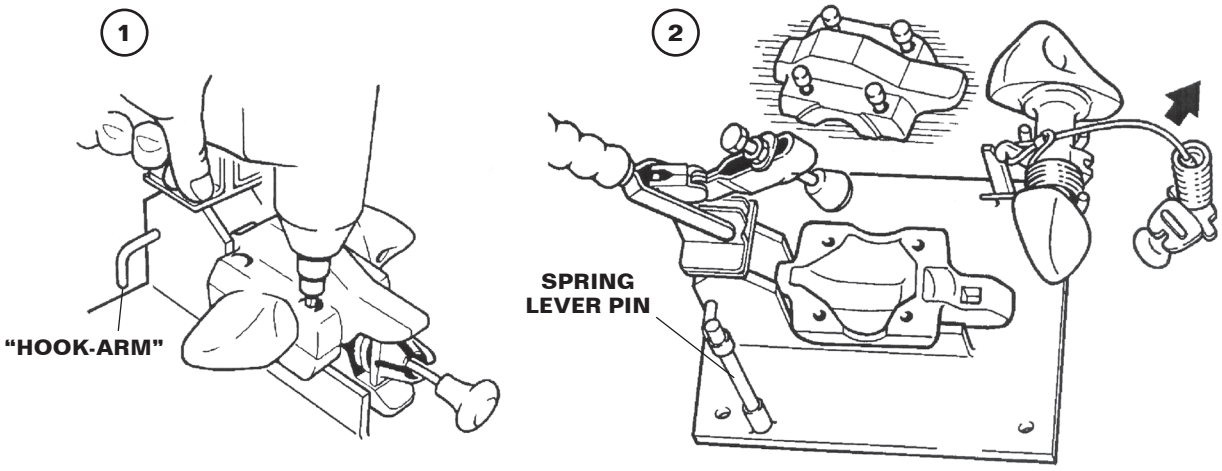
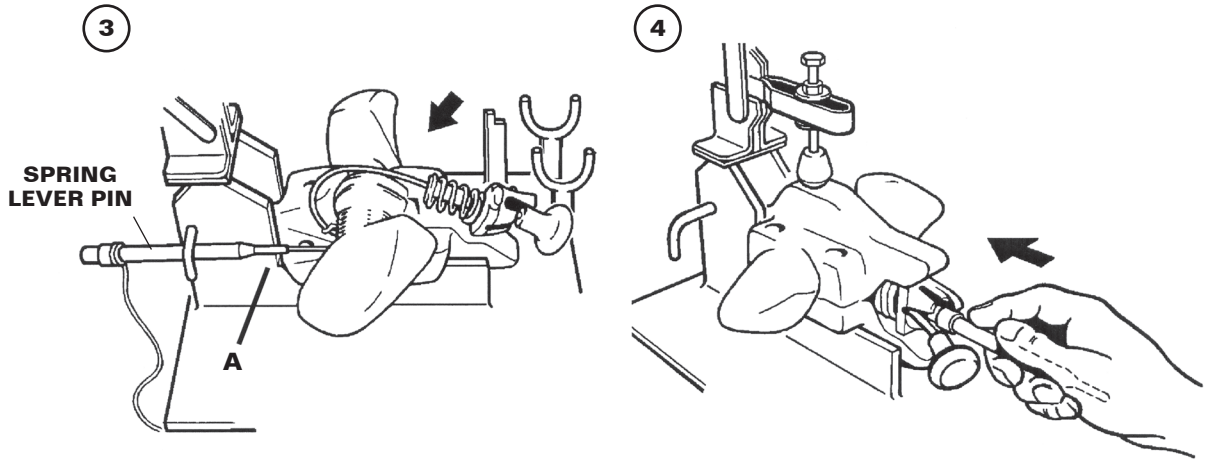
MACGREGOR ALLSET

HOW TO REPLACE A DAMAGED WIRE-HANDLE



1. **DISMANTLING:** PLACE THE TWISTLOCK IN THE JIG AND SECURE WITH THE TOGGLE-CLAMP. REMOVE THE 4 SOCKET-HEAD CAP SCREWS.

2. **REMOVE OLD WIRE-HANDLE:** RELEASE CLAMP AND REMOVE THE UPPER HALF OF THE HOUSING, LIFT OUT THE SHAFT AND REMOVE THE WIRE-HANDLE FROM THE SHAFT. REMOVE THE SPRING AND HANDLE GUIDE FROM THE OLD WIRE-HANDLE.



3. **ASSEMBLY OF NEW WIRE-HANDLE:** EXAMINE SHAFT AND SPRING FOR DEFECTS, EXAMINE SPRING AND HANDLE GUIDE FOR DEFECTS, THEN MOUNT THEM ONTO THE NEW WIRE-HANDLE. FIT THE NEW WIRE-HANDLE ONTO THE SHAFT. GREASE AND PLACE SHAFT IN LOWER HALF OF HOUSING. PRE-TENSION THE SPRING (A) AND SECURE THE JIG.

4. **ASSEMBLY:** FIT UPPER HALF OF HOUSING AND FIX WITH TOGGLE-CLAMP. PUSH MOUTH PIECE INTO OPERATION POSITION IN HOUSING. INSERT THE 4 SCREWS AND TIGHTEN THOROUGHLY.

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MACGREGOR ALLSET

MT-1 SERVICE JIG USER INSTRUCTIONS

1. Place the lock on the side in the slot in the middle of the jig with the handle toward you and the yellow head to the right.
2. Close the clamp (adjust pressure with the bolt and nut above the rubberfoot if necessary).
3. Loosen the four housing bolts. We recommend using an impact wrench (Model 5003-MT-2) and the 8 MM socket hex bit for 1/2" drive (Model 5003-MT-3).
4. Open the clamp. The upper housing half will now "pop up" about 2 inches due to the spring pressure.
5. Remove the stem to replace the handle or the entire stem. Remember to fit the handle guide and the compression spring onto the new handle before attaching the handle to the stem.
6. The cradle and vertical bar in the right corner on the jig is an assist to get the handle loop onto the stem arm. Put the wire loop (with the wire handle end pointing away from you) at the top of the vertical flat bar with the notch, turn the stem onto the notch and hold it firmly onto the notch with your left hand. Take the handle and pull it with a quick jerk, and the loop will “jump” onto the stem arm over the end knob (the wire handle loop can also be pushed onto the stem arm knob using your two thumbs, but after 50 or so handles, it is tough going!). After attaching the wire handle to the stem, make sure the wire cable is fitted under the hook at the end of the spring to keep the wire in position.
7. When re-assembling, grease the bearing areas on the bottom housing half before putting the stem down with the yellow cone to the right, and with the stem arm into the bottom of the housing.
8. Take the spring lever pin and push it onto the end of the spring arm about 1/8", bend the spring back and hook the lever pin in under the “hook arm” welded on the side of the jig to hold the “spring-loaded” lever pin in position.
9. Grease the stem where the upper housing will make contact (under each stem head).
10. Pull the handle toward you, making sure the wire cable is resting in the slot on the stem. Place the handle guide in the lower housing half.
11. Place the upper housing half in position on top of the lower housing half with the four bolts already in the holes on the upper half.
12. Use a wide screwdriver to push in the upper part of the handle guide into the cavity in the upper housing half, while you at the same time are holding down the upper housing half with your hand.
13. While still holding down the upper housing half, place the clamp on top of the upper housing half with the spring lever still inbetween the housing halves.
14. Use an impact wrench and lightly spin two diagonally positioned bolts so they take the thread. Do not tighten down. If the bolt holes do not line up, use a hammer to tap the upper housing half to correct position.
15. Remove the spring lever from in between the housing halves.
16. Turn the other bolts to make sure they take thread and then tighten town on all four bolts to 74 Nm (50ftlb).
17. Once all four bolts are tight, loosen the clamp and take out the lock for cycle test. Hold the lock and pull the handle to make sure the stem is moving freely, and that the handle swage can be parked in all positions.
18. We also suggest that the yellow cone is repainted.

NOTE: If the arm on the stem is bent or the knob at the end of the stem arm is broken off, it is evident that the stem has been forced backwards. This happens sometimes when the container moves longitudinally at the same instance as the crane drops it onto the locks. The stem must then be scrapped; it cannot be used since the stem arm also regulates the stop positions of the stem.

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