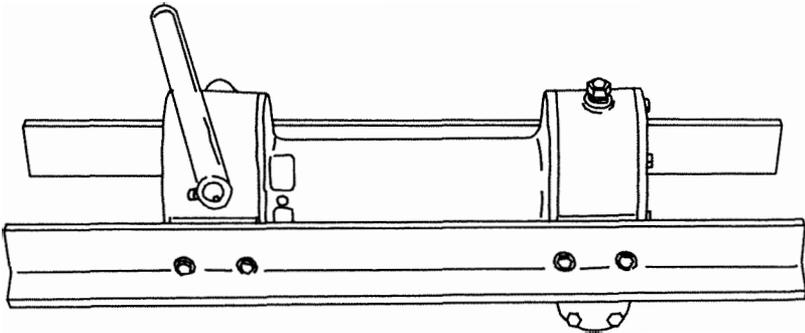




OPERATING, SERVICE AND MAINTENANCE MANUAL



MODEL 200 SERIES MODEL H-200 SERIES LEVER EQUIPPED INDUSTRIAL LOW-MOUNT WINCHES

INCLUDES 200/Y-200, 246/Y-246, D-200/DY-200
H-200/HY-200, H-246/HY-246, HD-200/HDY-200
AND MODELS EQUIPPED WITH OPTIONAL
ADJUSTABLE, AUTOMATIC, OIL COOLED SAFETY
BRAKE: G-200 SERIES & HG-200 SERIES



CAUTION: READ AND UNDERSTAND THIS MANUAL
BEFORE INSTALLATION AND OPERATION OF WINCH.
SEE SAFEGUARDS AND WARNINGS!

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RAMSEY WINCH MODEL 200/H-200 SERIES

PLEASE READ THIS MANUAL CAREFULLY.

This manual contains useful ideas in obtaining the most efficient operation from your Ramsey Winch, and safety procedures one needs to know before operating a Ramsey Winch.

WARRANTY INFORMATION

Ramsey Winches are designed and built to exacting specifications. Great care and skill go into every winch we make. If the need should arise, warranty procedure is outlined on the back of your self-addressed postage paid warranty card. Please read and fill out the enclosed warranty card and send it to Ramsey Winch Company. If you have any problems with your winch, please follow instructions for prompt service on all warranty claims. Refer to back page for limited warranty

* SPECIFICATIONS: CONFORMS TO SAE J706 ^Δ					
Rated Line Pull (lbs. 1st Layer).....		8,000 lbs.			
Gear Reduction: 200/H-200.....		60:1			
246/H-246.....		46:1			
D-200/HD-200.....		30:1			
Weight: 200/246/D-200.....		.85 lbs. (39 Kgs.)			
H-200/H-246/HD-200.....		.110 lbs. (50 Kgs.)			
Y-200/Y-246/YD-200.....		.80 lbs. (36 Kgs.)			
HY-200/HY-246/HYD-200.....		.105 lbs. (48 Kgs.)			
Layer of Cable		1	2	3	4
Rated Line Pull	Lbs.	8,000	6,700	5,700	5,000
per layer	Kgs.	3,620	3,030	2,610	2,290
Long Drum					
Cable capacity	Ft.	25	60	95	140
per layer	M.	8	18	30	43
Short "Y" Drum					
cable capacity	Ft.	15	30	55	75
per layer	M.	4	9	16	22
Line Speed	Worm RPM	1	2	3	4
200	FPM	16.8	20.0	23.0	26.0
Y-200	MPM	5.0	6.0	7.0	8.0
246	FPM	22.0	26.0	29.0	34.0
Y-246	MPM	6.6	7.8	8.8	10.5
D-200	FPM	33.0	40.0	46.0	53.0
YD-200	MPM	10.1	12.1	14.1	16.1
H-200	FPM	12.6	15.1	17.5	20.0
HY-200	MPM	3.8	4.5	5.3	6.0
H-246	FPM	16.5	19.7	22.0	26.0
HY-246	MPM	5.0	5.9	6.6	7.9
HD-200	FPM	25.0	30.0	35.0	40.0
HDY-200	MPM	7.6	9.1	10.6	12.1
*These specifications are based on recommended 3/8 inch dia. extra improved plow steel wire rope or equivalent.					
ΔWinch only conforms to SAE J706. For SAE qualification of mounting angles, if applicable, consult Ramsey Engineering.					

NOTE: The rated line pulls shown are for the winch only. Consult the wire rope manufacturer for wire rope ratings.

TECHNIQUES OF OPERATION

The best way to get acquainted with how your winch operates is to make test runs before you actually use it. Plan your test in advance. Remember, you hear your winch, as well as see it operate. Get to recognize the sounds of a light steady pull, a heavy pull, and sounds caused by load jerking or shifting. Gain confidence in operating your winch and its use will become second nature with you.

The uneven spooling of cable, while pulling a load, is not a problem, unless there is a cable pileup on one end of drum. If this happens reverse the winch to relieve the load and move your anchor point further to the center of the vehicle. After the job is done you can unspool and rewind for a neat lay of the cable.

When pulling a load where there is even a remote chance of cable failure, place a blanket, jacket or tarpaulin over the cable about six yards behind the hook. This will slow the snap back of a broken cable and could prevent serious injury.

NOTE: The Ramsey Level Winder for both drum lengths is an available accessory for tightly respooling unloaded cable onto the drum.

The winch clutch allows rapid unspooling of the cable, from cable drum, for hooking onto a load. The clutch is operated by the lever located on the clutch housing of winch.

1. TO DISENGAGE CLUTCH, run the winch in the reverse (reel out) direction until load is off the cable. Grasp lever and push toward drum to the "OUT" position. The lever is latched "OUT" by ball and detent in jaw clutch and drum shaft. The cable may now be pulled from cable drum by hand.
2. TO ENGAGE CLUTCH, pull handle away from drum to the "IN" position, while rotating drum, until clutch jaws engage with drum jaws. CLUTCH MUST BE TOTALLY ENGAGED DURING WINCHING OPERATIONS. The lever is latched "IN" by ball and detent in jaw clutch and drum shaft. The plastic plug in top of clutch housing may be removed, for inspection of clutch, to assure total engagement.

SAFEGUARDS - WARNINGS :

CLUTCH MUST BE TOTALLY ENGAGED BEFORE STARTING THE WINCHING OPERATION.

DO NOT DISENGAGE CLUTCH UNDER LOAD.

DO NOT LEAVE CLUTCH ENGAGED WHEN WINCH IS NOT IN USE.

STAY OUT FROM UNDER AND AWAY FROM RAISED LOADS.

STAY CLEAR OF CABLE WHILE PULLING. DO NOT TRY TO GUIDE CABLE.

DO NOT EXCEED MAXIMUM LINE PULL RATINGS SHOWN IN TABLE.

DO NOT USE WINCH TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.

A MINIMUM OF 5 WRAPS OF CABLE AROUND THE DRUM BARREL IS NECESSARY TO HOLD THE LOAD. CABLE CLAMP IS NOT DESIGNED TO HOLD LOAD.

WINCH MAINTENANCE

Adhering to the following maintenance schedule will keep your winch in top condition and performing as it should with a minimum of repair.

A. WEEKLY

1. Check the oil level and maintain it to the oil level plug. If oil is leaking out, determine location and repair.
2. Check the pressure relief plug in top of the gear housing. Be sure that it is in good operating condition so that hot oil gasses may escape.
3. Lubricate cable with light oil.

B. MONTHLY

1. Lubricate the various grease fittings located in the cable drum, end bearing, clutch housing or clutch operating linkage. Any good grade of moly-disulfide containing grease is acceptable.
2. In the case of jaw clutch winches, check the action of the sliding clutch, making sure it is fully engaging and disengaging with the cable drum. Observe the jaws on both the clutch and cable drum, checking for rounding of the driving faces. If rounding has occurred they should be replaced immediately.
3. In the case of Dow-Lok clutches, check the action of the locking ring. Make sure it is spring loaded and free to move fully against the cable drum in the engaged position and that it is pulled fully away from the cable drum and latched when disengaged.
4. Check the winch mounting bolts. If any are missing, replace them and securely tighten any that are loose. Make sure to use only grade 5 bolts or better.
5. Check the torque setting of the oil cooled worm brake. Make any adjustments required, following the procedure described in ADJUSTING THE OIL COOLED WORM BRAKE in the Owner's Manual.
6. Check alignment of chain and sprockets and adjust as required to minimize wear.
7. Inspect the cable. If the cable has become frayed with broken strands, replace immediately.

C. ANNUALLY

1. Drain the oil from the winch annually or more often if winch is used frequently.
2. Fill the winch to the oil level plug with clean kerosene. Run the winch a few minutes with no load in the reel in direction. Drain the kerosene from the winch.
3. Refill the winch to the oil level plug with all purpose E.P. 140 gear oil.
4. Inspect frame and surrounding structure for cracks or deformation.
5. Gear wear can be estimated by rocking the drum back and forth and if necessary drain oil and remove cover for closer inspection.

WINCH MOUNTING

It is most important that this winch be mounted securely so that the three major sections (the clutch housing end, the cable drum and the gear housing end) are properly aligned.

All standard model 200/H-200 Series Winches are furnished with recommended mounting angles. Angle size is 1/4 x 2-1/2 x 2-1/2 x 36" Lg. high strength steel angle.

CABLE INSTALLATION

1. Unwind cable by rolling it out along the ground to prevent kinking. Securely wrap end of cable, opposite hook, with plastic or similar tape to prevent fraying.
2. Insert the end of cable, opposite hook end, into the 7/16" dia. hole in drum barrel. Secure cable to drum barrel, using setscrew furnished with winch. **TIGHTEN SETSCREW SECURELY.**
3. Carefully run winch in the "reel-in" direction. Keeping tension on end of cable, spool all the cable onto the cable drum, taking care to form neatly wrapped layers.

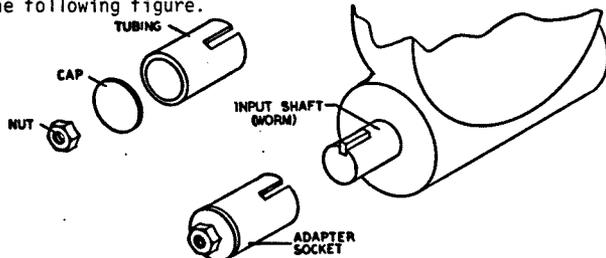
ADJUSTING THE OIL COOLED WORM BRAKE

The oil-cooled, fully adjustable, automatic safety brake operates in the worm housing lubricant, all parts being submerged in oil. When the brake wears to the point that the load begins to drift, the brake can be adjusted as follows:

1. Loosen the lock nut on the adjusting screw.
2. Tighten the brake by turning the adjusting screw clockwise. **CAUTION:** Only 1/4 turn is usually required to adjust the brake. Over-tightening can cause overheating, and damage to the brake parts. Tighten the lock nut after adjustment is completed.

If the brake does not respond to adjustment then a new leaf spring and brake disc is needed.

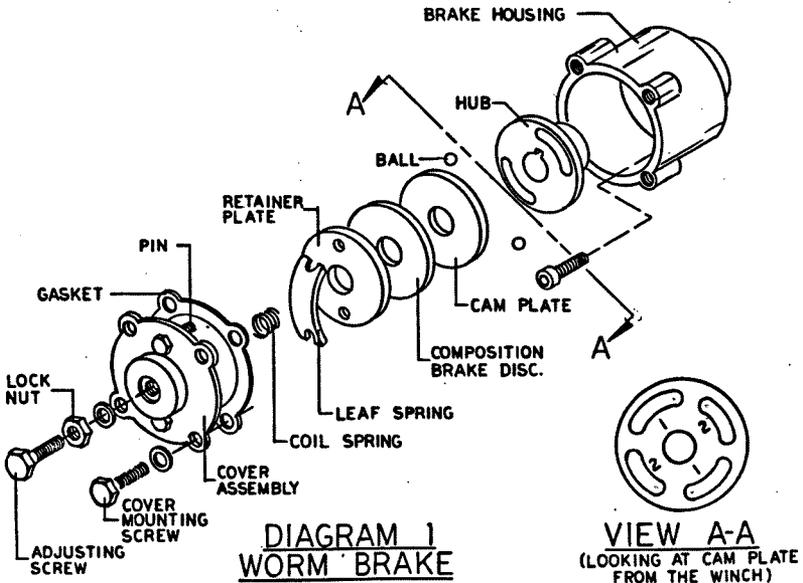
A torque wrench can be equipped with a special adapter to fit the input shaft (worm) of the winch. The adapter can be made by welding a nut to the end of a piece of tubing as shown in the following figure.



After welding the cap and nut to the tubing, slot the tubing as shown. This will allow the special adapter to slide over the keyway and will then act as a large socket. A torque wrench can then be used to apply the proper torque. Turn the torque wrench so that the drum turns in the spool out direction or lowering direction. The torque rating for the Model 200/246 should be 8 to 13 ft. lbs. (D-200, 13 to 18 ft. lbs.). If the torque wrench does not show the proper value as it turns, then the worm brake adjusting bolt should be turned clockwise 1/4 turn. Each time the adjusting bolt is turned, check the torque reading. Continue this procedure until the proper torque reading is achieved. Then tighten the lock nut.

SERVICING OF THE OIL COOLED SAFETY BRAKE

1. Remove the drain plug and drain the worm gear oil from the worm housing.
2. Back off the lock nut, then the adjusting screw, both two turns or more by turning them counter-clockwise.
3. Remove the cover mounting screws.
4. Remove the cover along with coil spring and leaf spring.
5. Remove the retainer plate, composition brake disc, cam plate and balls.
Note slots balls are in.
6. Inspect parts as follows:
 - a). Composition brake discs are $1/8$ " thick when new. Replace if thinner than 0.080" or if surfaces are glazed or burnt.
 - b). Inspect the flat, ground surface of the cam plate and retainer plate for glazing, warpage, or other damage. Glazing can be removed by scraping carefully.
 - c). Inspect the leaf spring. It should be bowed $1/8$ ".



RE-ASSEMBLING AND CHECKING THE BRAKE

1. Press brake hub into place over worm shaft and key.
2. Assemble ball into appropriate slots of cam. (Refer to diagram 1, page 5). Use stiff grease to hold balls into place and slide cam over end of worm. Be sure that balls are secure, between cam slots and hub slots. Refer to Page 7 to determine proper ball slot setting.
3. Install brake disc.
4. Install retainer plate, smooth side toward brake disc.
5. Install the gasket on the cover with a small amount of grease or sealer.
6. The coil spring goes over the adjusting screw on the inside of the cover.
7. Install the notches of the leaf spring on the pins protruding through the cover. The hollow side of the leaf spring goes toward the brake.
8. Install brake housing cover, making sure the protruding pins go through the leaf spring and into the holes in the retainer plate.
9. Bolt cover into place with the mounting screws. Install drain plug and add 1 pint of SAE 140 EP oil.
10. Turn winch in the hoisting direction at least one turn of the input shaft.
11. Turn the adjusting screw in until it is finger tight.

TEST FOR PROPER BRAKE ASSEMBLY

After the brake has been adjusted to the proper torque setting disengage clutch. Start vehicle engine and run winch in the reel in (hoisting direction). Allow winch to run in this direction for one minute.

Place your hand on the safety brake housing. If housing is not hot to the touch then run winch in the reverse direction (cable out) for one minute. Brake housing should begin to heat.

When these conditions exist, proper installation has been made. If heating becomes noticeable when running the winch in forward rotation (hoisting direction), the brake should be again disassembled. When disassembled, place the brake balls in the alternate set of slots in the cam plate, then carefully follow the instructions for re-assembling and checking the brake.

INSTRUCTIONS FOR CHECKING ASSEMBLY ARRANGEMENT AND SETTING OF WORM BRAKE

When the worm brake is assembled the brake must be set with the balls in the #1 or the #2 set of cam slots. (View A-A, page 5). It is indicated on the name plate whether the balls were installed in the #1 or the #2 slots at the factory.

Three factors determine which slots the balls should be in:

1. Direction cable winds on the drum. It normally **WINDS OVER THE TOP** of the drum barrel.
2. The cut of the gear set, right or left gear. The last letter in the model number of the winch, either R or L, designates right or left gear set. Example: R-20AR, R-30L, 700R, 800L.
3. The side of the winch that the input shaft is on. The **INPUT SHAFT IS NORMALLY TOWARD THE CAB**. Whether the winch has the gear box on the right or on the left side of the winch does not affect the brake setting.

EXAMPLE: When cable winds over the top of the drum, winch has a right cut gear and input shaft is toward the cab (diagram 2), then the balls need to be in the #2 cam slots.

If any one of these three factors differ from those stated above, the balls need to be in the #1 slots in the cam. A second change in these factors requires the original arrangement, and if all three factors are different, the balls need to be in the #1 slots. (See page 5 and 6 for disassembly and assembly instructions).

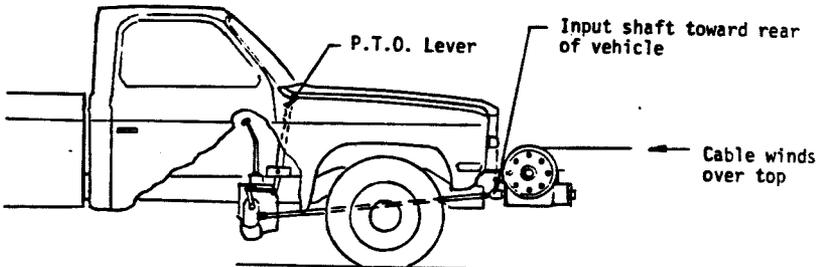


DIAGRAM 2

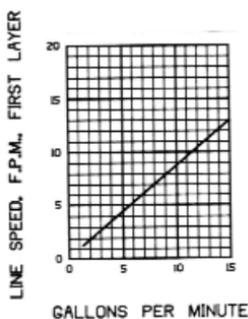
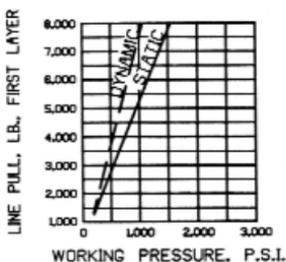
Three factors determine brake assembly arrangement.

HYDRAULIC SYSTEMS

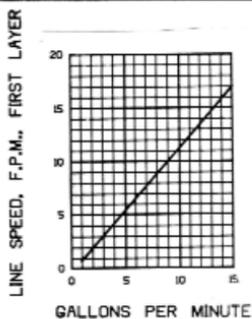
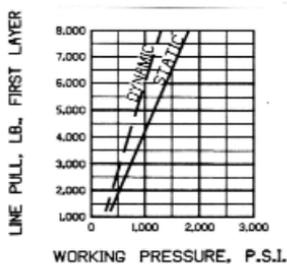
Refer to the performance charts, below, to properly match your hydraulic system to the H-200 Series winch performance. The charts consist of:
 (1) Line speed, first layer (F.P.M.) vs. gallons per minute (G.P.M.) and
 (2) Line pull (lbs.) first layer vs. working pressure (P.S.I.). STATIC (solid line) refers to hoisting a suspended load from rest; DYNAMIC (dotted line) refers to maintaining the motion of a moving load.

Performance based on a motor displacement of 4.5 cubic inches with 15 GPM maximum flowrate. See page 17 for motor port size.

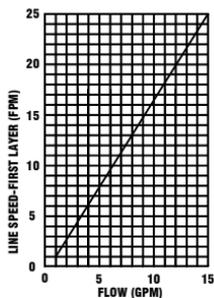
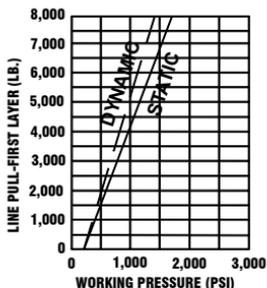
H-200 PERFORMANCE
 8,000 LB. DUTY RATING
 60:1 GEAR RATIO

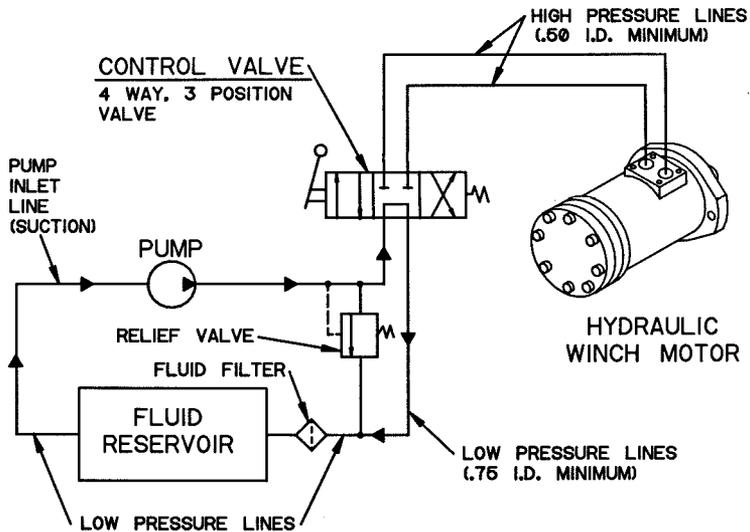


H-246 PERFORMANCE
 8,000 LB. DUTY RATING
 46:1 GEAR RATIO



HD-200 PERFORMANCE
 8,000 LB. DUTY RATING
 30:1 GEAR RATIO (HD-200)





TROUBLE SHOOTING TIPS

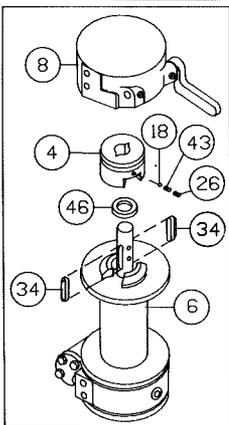
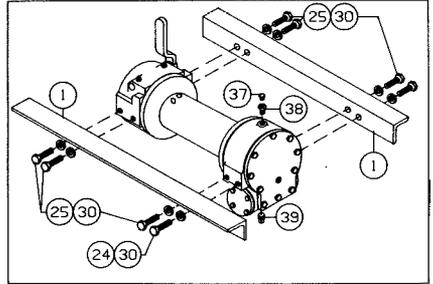
CONDITION	POSSIBLE CAUSE	CORRECTION
CLUTCH INOPERATIVE OR BINDS UP.	<ol style="list-style-type: none"> 1. Dry or rusted shaft. 2. Bent yoke or linkage. 3. Clutch jaws are in contact. 	<ol style="list-style-type: none"> 1. Clean and lubricate. 2. Replace yoke or shaft assembly. 3. See TECHNIQUES OF OPERATION.
OIL LEAKS FROM HOUSING.	<ol style="list-style-type: none"> 1. Seal damaged or worn. 2. Too much oil. 3. Damaged gasket. 	<ol style="list-style-type: none"> 1. Replace seal. 2. Drain excess oil. Refer to TECHNIQUES OF OPERATION. 3. Replace gasket.
LOAD DRIFTS DOWN.	<ol style="list-style-type: none"> 1. Safety brake has become worn. 2. Safety brake out of adjustment. 	<ol style="list-style-type: none"> 1. Replace brake disc. (See Page 5, Diagram 1). 2. Turn adjusting bolt clockwise 1/4 turn or until load does not drift.
WINCH RUNS TOO SLOW.	<ol style="list-style-type: none"> 1. Hydraulic motor worn out. 2. Low flow rate. 	<ol style="list-style-type: none"> 1. Replace motor. 2. Check flow rate. Refer to HYDRAULIC SYSTEMS flow chart Page 8.
CABLE DRUM WILL NOT FREE SPOOL.	<ol style="list-style-type: none"> 1. Winch not mounted squarely, causing end bearings to bind drum. 	<ol style="list-style-type: none"> 1. Check mounting. Refer to WINCH MOUNTING Page 4.
CABLE BIRDNESTS WHEN CLUTCH IS DISENGAGED.	<ol style="list-style-type: none"> 1. Drag brake disc worn. 	<ol style="list-style-type: none"> 1. Replace discs.
HYDRAULIC FLUID LEAKS OUT HOLE IN MOTOR ADAPTER.	<ol style="list-style-type: none"> 1. Hydraulic motor shaft seal damaged. 	<ol style="list-style-type: none"> 1. Replace seal.

INSTRUCTIONS FOR OVERHAUL OF RAMSEY
MODEL 200/H-200 SERIES LEVER STYLE WINCHES

DISASSEMBLY

Refer to Parts List & Parts Drawing Pages for actual
item numbers and corresponding parts numbers.

1. Drain oil from gear housing by removing (item #39) plug from bottom of gear housing. Remove plugs (items #37 & #38) from top of gear housing. Remove mounting angles from winch by removing hardware shown.



2. Slide clutch housing (item #8) from end of drum shaft. Remove setscrew, spring and poppet ball (items #26, #43 & #18) from jaw clutch (item #4). Slide jaw clutch from end of drum shaft.

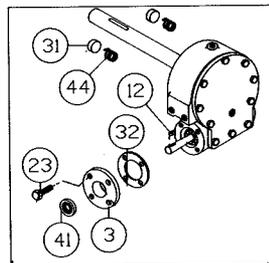
Remove two keys (item #34) from keyways. A screwdriver can be used, at notch, to aid in the removal of keys. Once keys have been removed, drum (item #6) and thrust washer (item #46) can be removed from drum shaft.

3. Remove key (item #12) from worm shaft.

Remove bearing cap (item #3) and gasket (item #32) by unscrewing four capscrews (item #23).

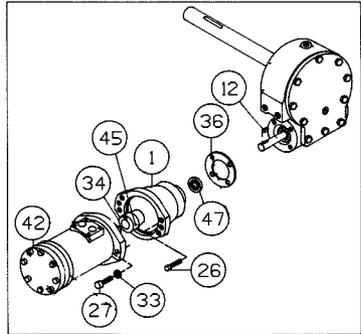
Remove seal (item #41) from bearing cap and press new seal into place.

Drag brake disc (item #31) and spring (item #44) should be examined and replaced if necessary.



- Remove motor (item #42) and coupling (item #34) from (item #1) adapter by unscrewing two (item #27) capscrews.

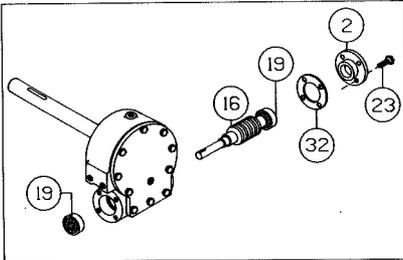
Remove key (item #12) from worm shaft. Unscrew four capscrews (item #26) and remove adapter from gear housing. Replace adapter seal (item #47) and gasket (item #36).



- Remove bearing cap (item #2) from gear housing by unscrewing four cap screws (item #23). Remove worm (item #16) and bearings (item #19) from gear housing. Use a soft hammer to gently tap input end of worm and drive worm and bearing from gear housing. Once worm has been removed from housing, bearing can be pressed from end of worm.

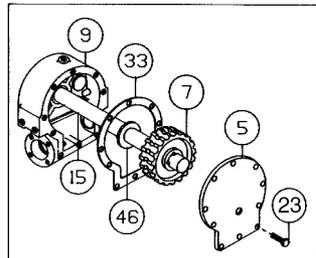
Check for signs of wear or damage to worm (item #16) and bearings (item #19). Replace if necessary.

For models with optional worm brake refer to Pg. 5, SERVICING OF THE OIL COOLED SAFETY BRAKE, for disassembly instructions.



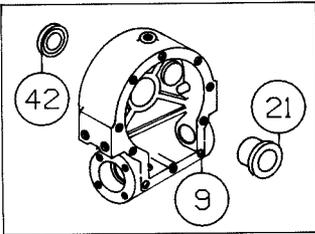
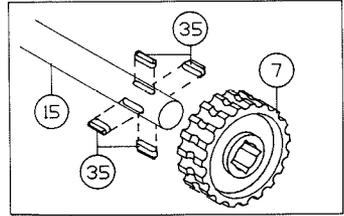
- Remove gear housing cover (item #5) from gear housing (item #9) by unscrewing cap screws (item #23). Thread two of the cap screws into the two tapped holes of cover and tighten. This will pull the cover loose from gear housing.

Remove cover gasket (item #33) and pull shaft (item #15), with gear attached, and thrust washer (item #46) from gear housing.



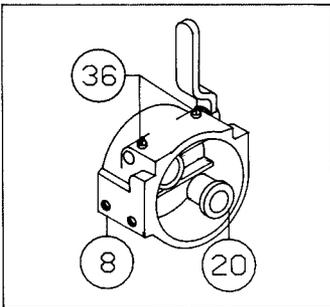
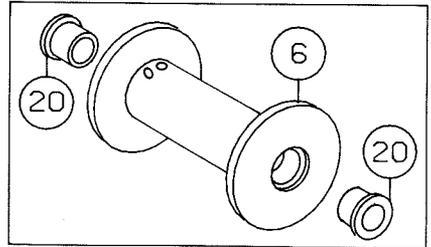
7. Check for signs of wear on gear teeth. If replacement of gear is necessary, replace as follows:

- a) Press gear (item #7) from shaft (item #15).
- b) Examine shaft keys and keyways. If distortion of keys and/or keyways is evident, shaft and keys should be replaced.
- c) Use a soft hammer to gently tap keys (item #35) into keyways. Press gear (item #7) over shaft and keys. Gear must be centered over keys.



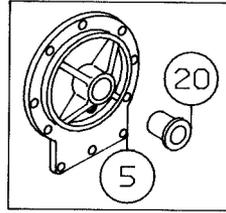
8. Remove seal (item #42) from back of (item #9) gear housing. Press bushing (item #21) from gear housing. Press new bushing and seal back into place.

9. Check drum bushings (item #20) for signs of wear. Replace if necessary by pressing old bushings from drum. Press new ones into place.

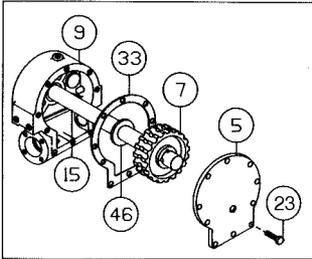


10. Check clutch housing bushing (item #20) for wear. If necessary, remove old bushing and press new bushing into place. Apply grease to lube fittings (item #36) to lubricate clutch shifter shaft.

11. Check cover bushing (item #20) for signs of wear. If necessary remove old bushing and press new bushing into place.

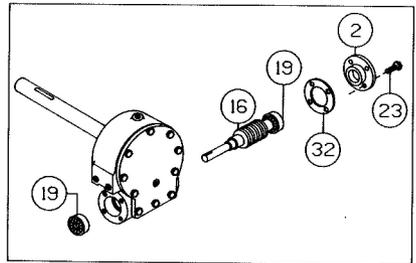


RE-ASSEMBLY

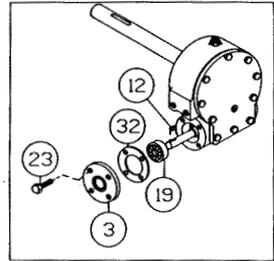


12. Apply grease to end of shaft, opposite gear. Apply grease to bushing in gear housing (item #9). Place greased end of shaft through thrust washer (item #46) and bushing in gear housing (item #9). Place gasket (item #33) onto gear housing cover (item #5). Apply grease to gear end of shaft and cover bushing. Place cover onto shaft and secure to housing with ten (item #23) capscrews. **TIGHTEN CAPSCREW TO 8 FT.-LBS. (10.8 Nm) EACH.**

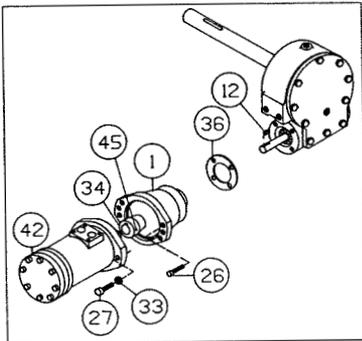
13. Press bearing (item #19) onto worm (item #16). **NOTE:** Be sure that thick shoulder of bearings outer race (side with manufacturer's name and part number) is out, away from worm threads. Press bearing and worm into gear housing. Slip gasket (item #32) onto bearing cap (item #2). Use four capscrews (item #23) to secure cap to gear housing. **TIGHTEN CAPSCREWS TO 8 FT. LBS. (10.8 Nm.) EACH.**



14. Press bearing (item #19) onto worm and into gear housing. **NOTE:** Be sure that thick shoulder of bearings outer race (side with manufacturer's name and part number) is out, away from worm threads. Place gasket (item #32) onto bearing cap (item #3). Attach bearing cap to gear housing. Use four (item #23) capscrews to secure. **TIGHTEN CAPSCREWS TO 8 FT. LBS. (10.8 Nm.) EACH.** Tap key (item #12) into keyway.

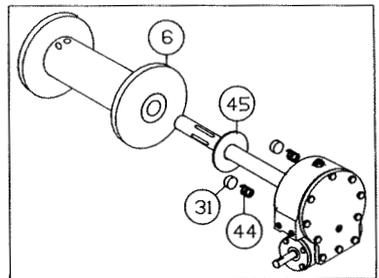


15. Press bearing (item #19) onto worm and into gear housing. **NOTE:** Be sure that thick shoulder of bearings outer race (side with manufacturer's name and part number) is out, away from worm threads. Place gasket (item #36) onto adapter (item #1). Attach adapter to gear housing using four (4) capscrews (item #26). **TIGHTEN CAPSCREWS TO 12 FT. LBS. (16.3 Nm) EACH.** Insert key (item #12) into keyway of worm shaft. Slide tapered end of coupling (item #34) over end of worm shaft. Be sure roll pin (item #45) is in coupling.



Place motor shaft, with key in keyway, into coupling. Secure motor (item #42) to adapter, using two (2) capscrews (item #27) and lockwashers. **TIGHTEN CAPSCREWS TO 75 FT. LBS. (102 Nm) EACH.**

16. Place winch with gear housing cover down on work bench. Drum shaft should be in vertical position. Slide thrust washer (item #45) over drum shaft and slide downward until washer rests on gear housing. Set springs (item #44) into pockets of gear housing with drag brakes (item #31) on top of springs. Slide drum assembly (item #6) onto drum shaft with drum jaws upward.



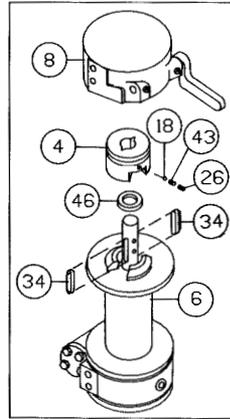
17. Slide spacer (item #46) over end of drum shaft. Press drum downward to compress drag brake springs in gear housing. Insert keys (item #34) into keyways with sharp edge of keys pointing outward and notched end of keys upward. A rubber or brass mallet will be needed to gently tap keys into position.

Apply grease to keys and end of shaft. Place jaw clutch (item #4) over end of shaft and slide jaw clutch over keys.

NOTE: Be sure that tapped hole on side of jaw clutch is on same side of shaft as the two ball detents. Insert ball poppet (item #17), spring (item #43) and setscrew (item #26) into tapped hole of jaw clutch.

If jaw clutch and, or drum shaft have been replaced two detents for ball MUST be drilled as follows:

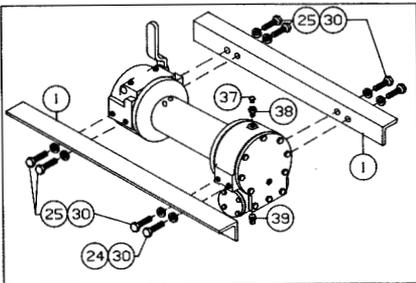
Slide jaw clutch over end of shaft. Align jaws of clutch with jaws of drum. Use a 1/4" dia. drill, using hole in jaw clutch as a guide, to drill a 1/8" deep detent in shaft. Slide jaw clutch upward 3/4" and drill 2nd detent.



Apply grease to bushing in clutch housing assembly (item #8). Set clutch housing onto end of drum shaft. Pull jaw clutch upward, toward clutch housing, enough to allow yoke in clutch housing, to fit properly in groove around jaw clutch. Slide clutch housing assembly and jaw clutch downward into place.

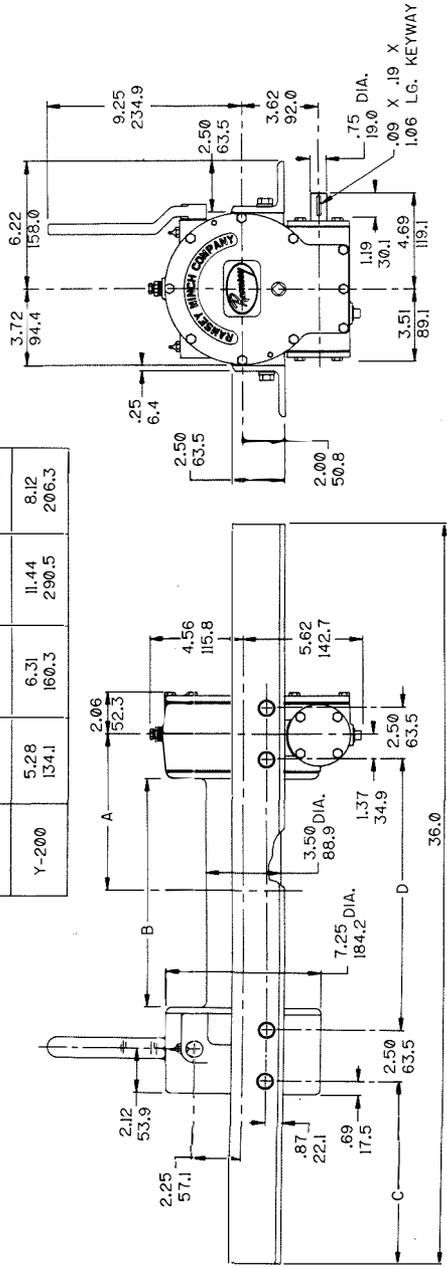
The setscrew should be tightened enough to allow ball, when placed in ball detents, to sufficiently lock jaw clutch "IN" and "OUT".

18. Attach two mounting angles (item #1) using six capscrews (item #25) with lockwashers and two capscrews (item #24). Torque capscrews to 34 ft. lbs. (46 Nm.) each. Insert plug (item #39) into bottom of gear housing. Permatex may be applied to threads to help prevent leakage.



Pour 3/4 pint of SAE 140 EP gear oil (1 pt. if winch has a brake) into housing thru hole in top of housing. Insert relief fitting (item #37) into reducer (item #38). Reducer should then be placed into hole on top of gear housing. Tighten fitting and reducer securely.

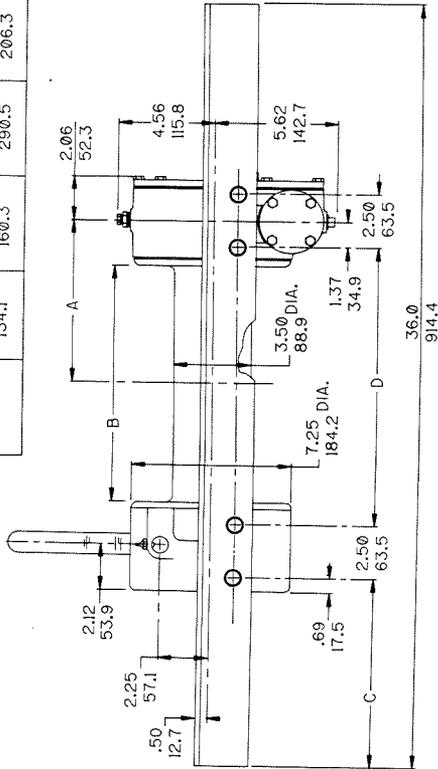
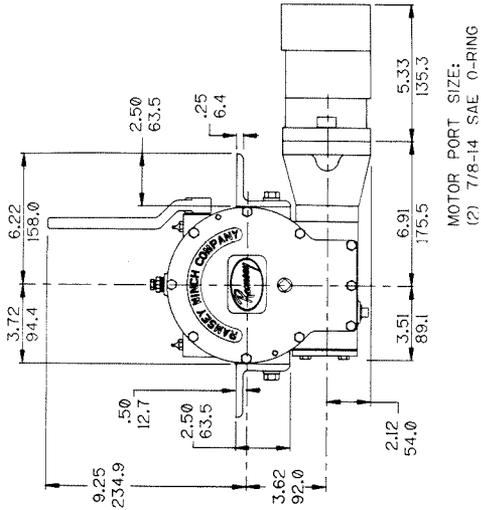
WINCH MODELS	A INCHES MM	B INCHES MM	C INCHES MM	D INCHES MM
200	7.78 197.6	11.31 287.3	8.94 227.0	13.12 333.3
Y-200	5.28 134.1	6.31 160.3	11.44 290.5	8.12 206.3



DIMENSIONS SHOWN ARE INCHES OVER MILLIMETERS

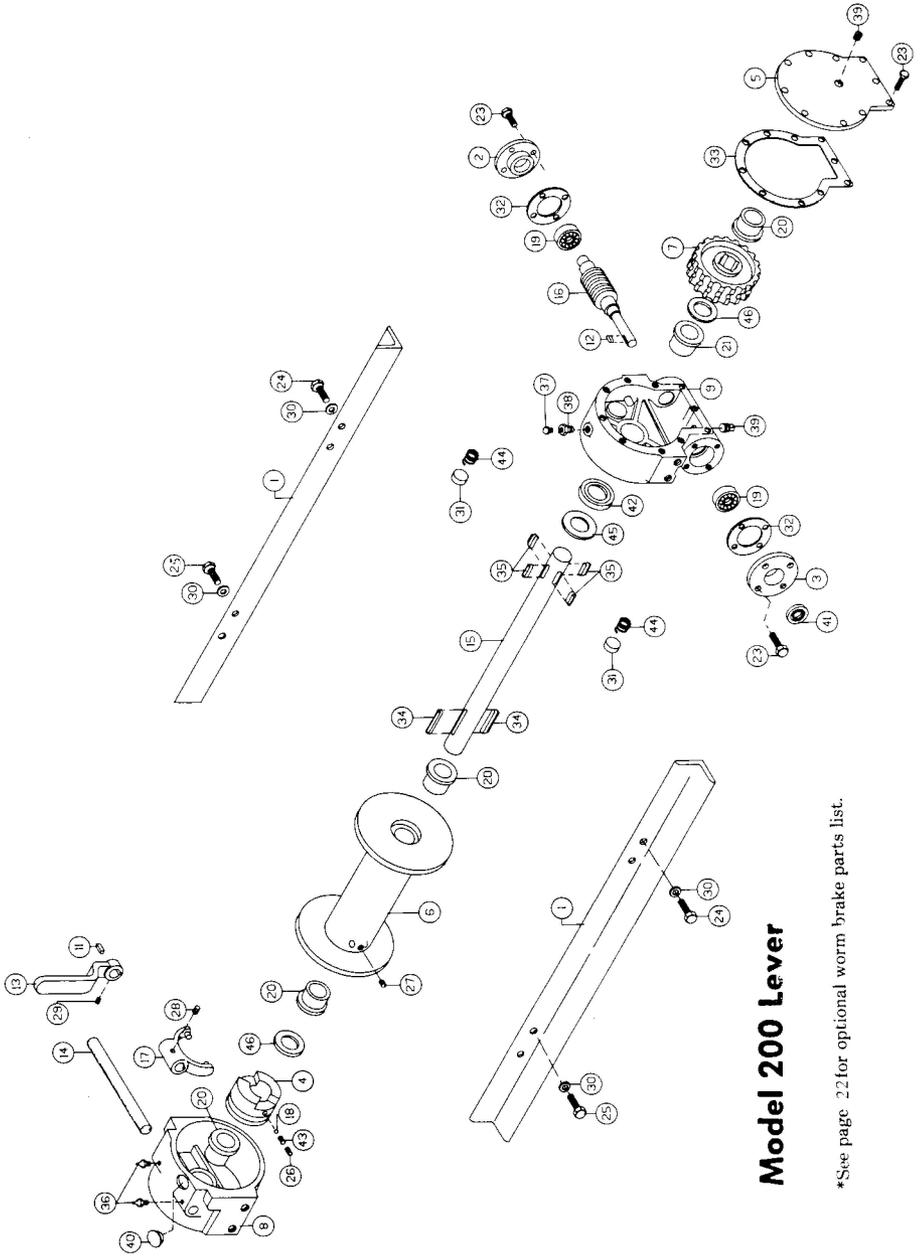
Model 200 Lever

WINCH MODEL	A INCHES MM	B INCHES MM	C INCHES MM	D INCHES MM
H-200	7.78 197.6	11.31 287.3	8.94 227.0	13.12 333.3
HY-200	5.28 134.1	6.31 160.3	11.44 290.5	8.12 206.3



DIMENSIONS SHOWN ARE INCHES OVER MILLIMETERS

Model H-200 Lever



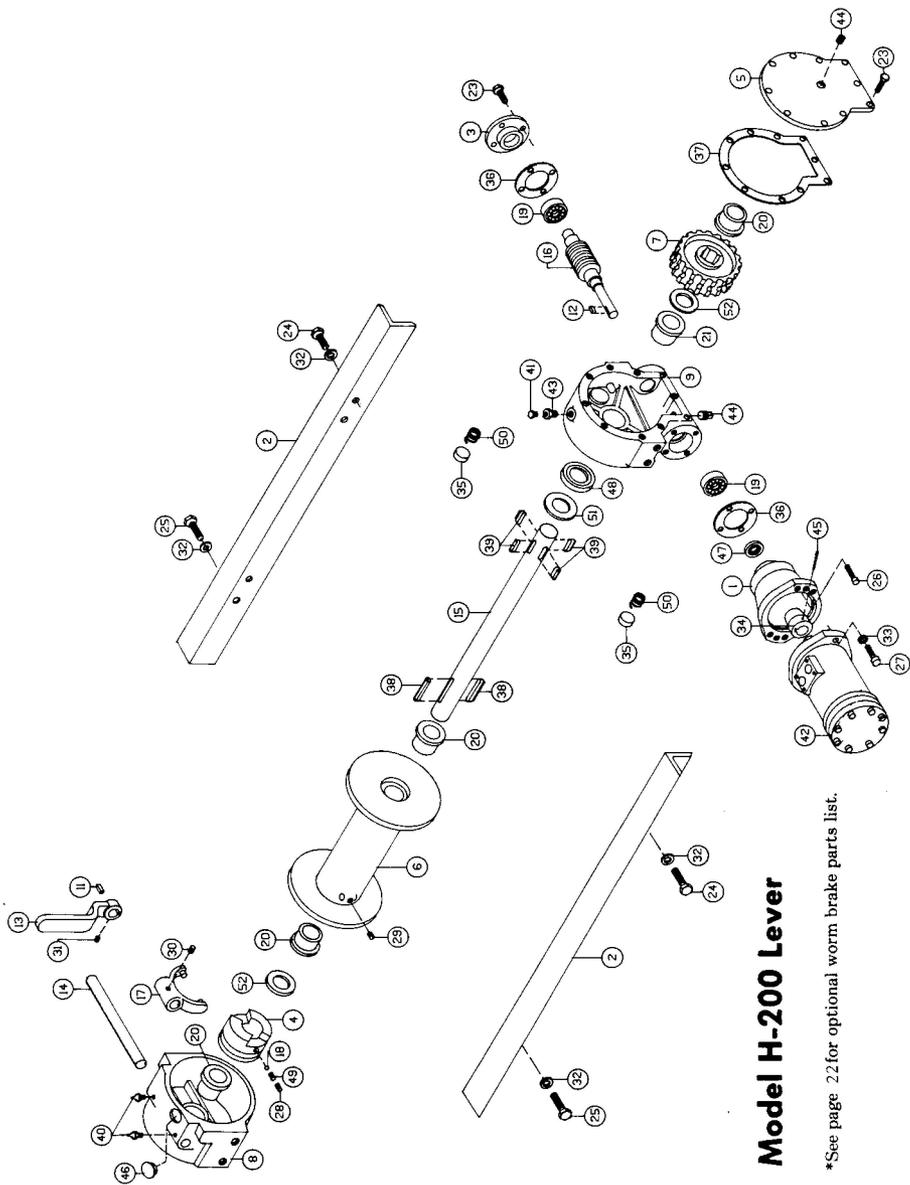
Model 200 Lever

*See page 22 for optional worm brake parts list.

PARTS LIST

Model 200 Lever

Item No.	Qty.	Part No.	Description	Item No.	Qty.	Part No.	Description
1	2	302818	ANGLE-STD*	23	18	414045	CAPSCREW 1/4-20NCx7/8 LG. HX. HD. GR.5
2	1	302819	ANGLE-Y	24	2	414279	CAPSCREW 3/8-16NCx3/4 LG. HX. HD. GR.5
3	1	316083	BEARING CAP	25	6	414282	CAPSCREW 3/8-16NCx1-1/4 LG. HX. HD. GR.5
4	1	316084	BEARING CAP	26	1	416040	SETSCREW 1/4-20NCx1/4 SOC. HD. LESS
5	1	324161	JAW CLUTCH	27	1	416059	SETSCREW 3/8-16NCx3/8 SOC. HD. LESS
6	1	328134	COVER	28	1	416084	SETSCREW 1/4-20NCx1/2 LG. SQ. HD.
6	1	332007	DRUM-Y*	29	1	416109	SETSCREW 5/16-18NCx1/2 LG. SQ. HD.
7	1	332105	DRUM-STD*	30	8	418177	LOCKWASHER 3/8 MED. SECT. C.P.
	1	334161	GEAR R.H. 60:1	31	2	438014	DRAG BRAKE
	1	334162	GEAR L.H. 60:1	32	2	442184	GASKET
	1	334163	GEAR R.H. 46:1	33	1	442006	GASKET
	1	334164	GEAR L.H. 46:1	34	2	450016	KEY-BARTH
	1	334165	GEAR R.H. 30:1	35	4	450016	KEY-BARTH
	1	334166	GEAR L.H. 30:1	36	2	456006	FITTING-LUBE
8	1	338003	HOUSING-CLUTCH	37	1	456008	FITTING-RELIEF
9	1	338273	HOUSING-GEAR	38	1	468002	REDUCER
10	1		NOT USED	39	2	488011	PIPE PLUG
11	1	342024	KEY	40	1	472013	PLASTIC PLUG
12	1	342027	KEY	41	1	486009	OIL SEAL
13	1	344008	LEVER-SHIFTER	42	1	486017	OIL SEAL
14	1	356902	SHAFT-SHIFTER	43	1	494001	SPRING-POPPET
15	1	357475	SHAFT-DRUM-STD*	44	2	494002	SPRING
	1	357481	SHAFT-DRUM-Y*	45	1	518014	THRUST WASHER
16	1	368002	WORM R.H. 46:1	46	2	518015	THRUST WASHER
	1	368007	WORM R.H. 60:1				
	1	368008	WORM L.H. 60:1				
	1	368009	WORM L.H. 46:1				
	1	368010	WORM L.H. 30:1				
	1	368011	WORM R.H. 30:1				
	1	370055	YOKE				
17	1						
18	1	400001	BALL-POPPET				
19	2	402002	BEARING-BALL				
20	4	412003	BUSHING				
21	1	412045	BUSHING				



Model H-200 Lever

*See page 22 for optional worm brake parts list.

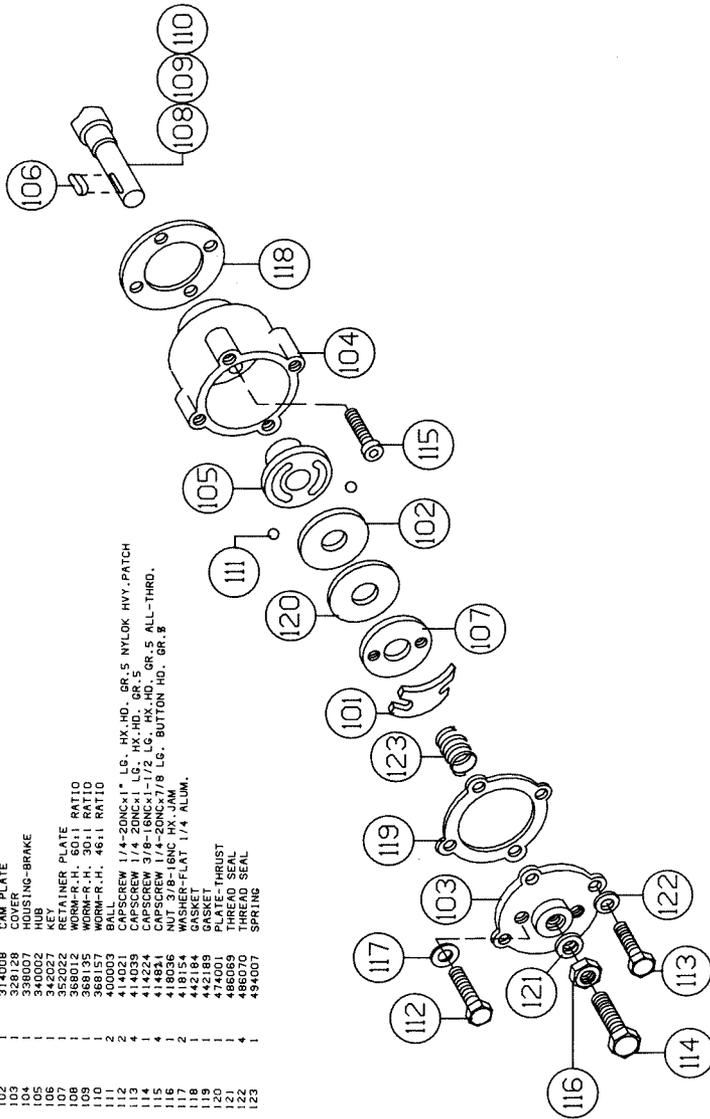
PARTS LIST

Model H-200 Lever

Item No.	Qty.	Part No.	Description	Item No.	Qty.	Part No.	Description
1	1	300057	ADAPTER	31	1	416109	SETSCREW 5/16-18NCx1/2 LG. SQ. HD. CUP PT.
2	2	302809	ANGLE-STD.	32	8	416177	LOCKWASHER 3/8 MED. SECT. C.P.
3	1	302810	ANGLE-Y	33	2	416218	LOCKWASHER 1/2-MED. SECT. C.P.
4	1	316083	BEARING CAP	34	1	431008	COUPLING
5	1	324161	JAW CLUTCH	35	2	438014	D1SC-BRAKE
6	1	328134	COVER	36	2	442184	GASKET
7	1	332105	DRUM-STD*	37	1	442205	GASKET
8	1	332007	DRUM-Y*	38	2	450006	KEY-BARTH
9	1	334161	GEAR R.H. 60:1	39	4	450018	KEY-BARTH
10	1	334163	GEAR R.H. 46:1	40	2	456008	FITTING-LUBE
11	1	334165	GEAR R.H. 30:1	41	1	456008	FITTING-RELIEF
12	1	338003	HOUSING-CLUTCH	42	1	458050	MOTOR-HYO.
13	1	338273	HOUSING-GEAR	43	1	468002	REDUCER
14	1	342024	NOT USED	44	2	468011	PLUG-PIPE
15	1	342027	KEY	45	1	470033	SPIROL PIN
16	1	344008	LEVER-SHIFT	46	1	472013	PLUG-PLASTIC
17	1	356902	SHAFT-SHIFT	47	1	486009	OIL SEAL
18	1	357479	SHAFT-DRUM-STD*	48	1	486017	OIL SEAL
19	1	357481	SHAFT-DRUM-Y*	49	1	494001	SPRING
20	1	368002	WORM R.H. 46:1	50	2	494002	SPRING
21	1	368007	WORM R.H. 60:1	51	1	518014	THRUST WASHER
22	1	368011	WORM R.H. 30:1	52	2	518015	THRUST WASHER
23	1	370685	YOKE				
24	1	400001	BALL-POPPET				
25	2	402002	BEARING-BALL				
26	4	412003	BUSHING				
27	1	412045	BUSHING				
28	14	414045	CAPSCREW 1/4-20NCx7/8 LG. HX. HD. GR.5				
29	6	414279	CAPSCREW 3/8-16NCx3/4 LG. HX. HD. GR.5				
30	6	414282	CAPSCREW 3/8-16NCx1-1/4 LG. HX. HD. GR.5				
31	4	414842	CAPSCREW 1/4-20NCx1-3/4 LG. SOC. HD. LOK-WEL				
32	2	414952	CAPSCREW 1/2-13NCx1-1/2 LG. SOC. HD. C.P.				
33	1	416040	SETSCREW 5/16-18NCx1/4 LG. SOC. HD. LESS				
34	1	416059	SETSCREW 3/8-16NCx1/2 LG. SOC. HD. LESS				
35	1	416084	SETSCREW 1/4-20NCx1/2 LG. SQ. HD. CUP PT.				

Item No. Qty. Part No. Description

101	1	306034	SPRING-FLAT
102	1	328128	PLATE
103	1	328128	COVER
104	1	338007	HOUSING-BRAKE
105	1	44002	W/B
106	1	552022	RETAINER PLATE
107	1	368012	WORM-R.-H. 50:1 RATIO
108	1	368127	WORM-R.-H. 30:1 RATIO
109	1	368127	WORM-R.-H. 46:1 RATIO
110	2	400003	BALL
111	2	414021	CAPSCREW 1/4-20X1" LG. HK.HD. GR.5 NYLOK HVY.PATCH
112	4	414224	CAPSCREW 3/8-20X1 LG. HK.HD. GR.5 NYLOK HVY.PATCH
113	4	414824	CAPSCREW 1/4-20X3/8 LG. HK.HD. GR.5 NYLOK HVY.PATCH
114	4	414824	CAPSCREW 1/4-20X3/8 LG. BUTTON HD. GR.5
115	1	418036	NUT 3/8-16NC HK.JAM
116	1	442184	GASKET-FLAT 1/4 ALUM.
117	2	442184	GASKET
118	1	442189	GASKET
119	1	474001	PLATE-THRUST
120	1	486070	THREAD SEAL
121	1	486070	THREAD SEAL
122	4	494007	SPRING
123	1		



**KITS AND MAINTENANCE PARTS
160389**

Item#	QTY.	PART NUMBER	DESCRIPTION	KITS					
				207030	207058	246053	248063	250513	283081
1	1	300057	ADAPTER						
2	1	306034	SPRING-FLAT,BRK	X					
3	1	314008	CAM PLATE		X				
4	1	328128	COVER-WM BRK						
5	1	338007	BRAKE HOUSING						
6	1	340002	HUB-BRAKE		X				
7	2	342027	KEY-RD ENDS,3/16X3/16X1LG						X
8	2	342080	KEY-RD ENDS,5/16X5/16X1 1/4LG						
9	1	352022	RETAINER PLATE-BRK		X				
10	1	368202	WORM-RH DGL						
11	2	400003	BALL-POPPET 3/8 OD	X					
12	2	402002	BEARING-BALL					X	
13	1	413013	COVER-HYD ADP						
14	6	414021	BOLT-1/4NCX1,HXD,G8						
15	1	414224	BOLT-3/8-16NCX1 1/2,HX,G5						
16	2	414521	CAPSCREW-1/2-13NCX1LG HXHD						
17	4	414821	CAPSCREW-1/4-20NC X7/8,HXSOCBUTTHD						
18	4	414842	CAPSCREW-1/4-20NCX1 3/4,HXSOC						
19	1	418036	NUT-3/8-16 NC,HEX JAM						
20	2	418154	WASHER-1/4 FLAT ALUM.						
21	1	418181	WASHER-3/8 ID						
22	1	431008	COUPLING						X
23	2	442184	GASKET-BRG CAP			X		X	
24	1	442189	GASKET-BRK HSG COVER			X		X	
25	1	456008	RELIEF FIT-1/8-27PFT						
26	2	468018	PIPE PLUG-3/8-18NPTF HXSOCHD-LES,ZP						
27	1	470033	SPIROL PIN-1/8X7/8						X
28	1	474001	PLATE-THRUST	X					
29	1	486009	OIL SEAL-RL			X		X	
30	1	486017	OIL SEAL			X		X	
31	1	486069	SEAL-3/8 THRD			X			
32	4	486070	SEAL-PARKER			X			
33	1	494007	SPRING	X					
34	1	334165	GEAR-RH,DL					X	
35	1	338273	HOUSING-GEAR						
36	1	357183	SHAFT-DRUM					X	
37	1	412045	BUSHING-GH				X		
38	10	414045	CAPSCREW-1/4-20NCX7/8 LG. HEX HD, GR 5						

**KITS AND MAINTENANCE PARTS
160389**

				KITS					
Item#	QTY.	PART NUMBER	DESCRIPTION	207030	207058	246053	248063	250513	283081
39	1	442205	GASKET-GH CVR			X		X	
40	4	450016	KEY-BARTH,5/16X 15/16L					X	
41	2	468016	PIPE PLUG-1/8-27NPTF,HEX SOC. HD.						
42	3	468018	PIPE PLUG-3/8-18NPTF HXSOCHD						
43	1	518015	THRUST WASH-GH				X		
44	1	328155	COVER-GEAR HSG						
45	1	350675	PLATE-OIL DEFLECTOR						
46	1	412003	BUSHING-PWD BRZ,1.254 IDX1.173 LG				X		
47	2	416197	SCREW-#6-32NCX3/16,S						

**RAMSEY WINCH INDUSTRIAL WINCH
LIMITED WARRANTY**

1.1 Scope of Warranty Coverage. Upon the terms and subject to the conditions set forth in this limited warranty:

- (a) RAMSEY WINCH (referred to herein as “**RAMSEY WINCH**” or the “**Manufacturer**”) warrants to each initial end user customer (a “**Purchaser**”) of a new industrial winch together with any accessories manufactured and sold directly from RAMSEY WINCH (the “**Product**”) that the Product shall be free from defects in material and workmanship, under normal working and service conditions, for a period of eighteen (18) months from the date the Product is shipped from RAMSEY WINCH. (the “**Warranty Term**”). A Purchaser shall be eligible for an additional eighteen (18) months of coverage in addition to the Warranty Term (also referred to as the “**Standard (+) PLUS benefit**”) only if the Purchaser (i) complies with Section 1.2(a) and (ii) registers the Product during the Warranty Term at myproduct.ramseywinch.com.
- (b) Notwithstanding the foregoing, this warranty does not cover components damaged by accident, abuse, misuse, neglect, untrained operators, collision, overloading, modification, disassembly, rework, misapplication, improper installation, lack of lubrication or maintenance, or improper service. This warranty does not cover the paint or material finish, rope (wire or synthetic), removal or reinstallation of the winch, or normal wear and tear and loss of functionality due to aging of the Product (which may include but is not limited to bearings, bushings, seals, O-rings, gaskets, brake material, motor brushes, electrical cables and more).

1.2 Eligibility of Warranty Coverage.

- (a) A Purchaser shall be eligible for warranty coverage under this Limited Warranty during the Warranty Term only if:
 - (i) Prior to placing a Product in service, and throughout use of the Product during the Warranty Term, the Purchaser provides (or causes to be provided) proper storage such that foreign objects (e.g. rain or debris) cannot enter any Product through entry ports which are normally closed during operation.; and
 - (ii) The Purchaser maintains, or causes to be maintained, the Product according to commercially reasonable standards and utilizes the Product for the purposes for which it was created; and
 - (iii) No repairs or alterations have been made by any party other than RAMSEY WINCH, including Purchaser, unless otherwise authorized in writing by RAMSEY WINCH.

1.3 Transferability of Warranty.

- (a) This warranty is transferable only from the Purchaser to the first subsequent transferee (the “**Transferee**”) of the Product from Purchaser upon (i) written notification to RAMSEY WINCH and (ii) registration of the transfer, both within 30 days of such Product transfer.
- (b) Upon satisfaction of transfer requirements set forth in Section 1.3(a), the Transferee shall succeed to all the rights and obligations of the Purchaser set forth in this Limited Warranty.

1.4 Certain Limitations on Scope of Warranty Service.

- (a) Any obligation of RAMSEY WINCH under this warranty, statutory or otherwise, is limited to the repair of the Product, at its factory or Authorized Service Centers. Notwithstanding the foregoing, if field service or repair is performed by RAMSEY WINCH at the request of the Purchaser and no defect is found with material or workmanship of the Product, the Purchaser shall compensate RAMSEY WINCH for its time and expenses within thirty (30) days of delivery of an invoice relating to the same. If repair is determined by RAMSEY WINCH in its sole, absolute and uncontrolled discretion to be impossible or impractical, then RAMSEY WINCH may satisfy this warranty by replacing the Product. RAMSEY WINCH will not provide any cash payment or credits for defective materials or workmanship.

- (b) Purchaser shall be responsible for any and all freight charges for any Product receiving warranty service under this limited warranty. Any travel time, transportation charges, freight charges, or similar costs incurred by RAMSEY WINCH in connection with the replacement or repair of defective parts, shall, be the responsibility of the Purchaser. If applicable, RAMSEY WINCH shall invoice Purchaser for the total amount of such charges within sixty (60) days of fulfilling its duties under this warranty, payable within thirty (30) days of delivery of such invoice. In no event shall RAMSEY WINCH be liable for bills for service, labor or other expenses that have been incurred by the Purchaser without approval or prior authorization by RAMSEY WINCH for inspection, maintenance, or repair of the Product.
- (c) If a Product is found to be operable upon inspection, the Product, at Purchaser's election, may be either (1) returned to the Purchaser with a service charge from RAMSEY WINCH for inspection, cleaning, and routine replacement of all rubber components and any other parts that show wear; or (2) RAMSEY WINCH can dispose of the product safely.

1.5 **Limitations of Liability.** RAMSEY WINCH shall in no event be liable for punitive, special or consequential damages relating to the Product or this Warranty. RAMSEY WINCH makes no warranty in respect to third-party accessories, upgrades, or additions to the Product.

1.6 **Improving Product.** RAMSEY WINCH reserves the right to improve the Product through changes in design or materials as it may deem desirable or necessary without being obligated to incorporate, upgrade, or otherwise modify previously manufactured products.

1.7 **Limitations of Warranty.**

- (a) THE WARRANTY SET FORTH ABOVE IS THE ONLY EXPRESS WARRANTY. RAMSEY WINCH HEREBY DISCLAIMS AND EXCLUDES ANY OTHER EXPRESS, IMPLIED, OR STATUTORY WARRANTIES, ARISING BY OPERATION OF LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE, OF TRADE, OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY.
- (b) ANY IMPLIED WARRANTY WHICH BY LAW MAY NOT BE EXCLUDED IS LIMITED IN DURATION TO ONE (1) YEAR FROM THE DATE OF ORIGINAL RETAIL PURCHASE OF THE PRODUCT.
- (c) This warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.
- (d) This warranty is valid only in the U.S.A. and Canada. For warranty outside the U.S.A. and Canada contact your nearest Ramsey Winch Distributor.

1.8 **No Modifications to Warranty.** No RAMSEY WINCH dealer, distributor, agent or employee is authorized to make any modification, extension or addition to this warranty.

1.9 **How to Apply for Warranty Coverage.**

All claims are handled by contacting your nearest Ramsey Winch Distributor. For questions, please contact customer support: rwcustomersupport@ramseyindustries.com.

Visit [Dealer Locator - Ramsey Winch](#) for Ramsey Winch Distributor locations and contact information.

Additional warranty, service support, product information, and parts information can be found on www.ramseywinch.com.

NOTES

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