

## **380/385 Hydro Tension Control Kit**

### **INSTALLATION INSTRUCTIONS For KIT 904852**

This conversion kit is for all 380 & 385 PTO Hydraulic Balers manufactured before 2011 and applies to tension control tank assembly 904840

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# SAFETY SUMMARY

## GENERAL SAFETY NOTICES

The following pages contain general safety warnings which supplement warnings and cautions appearing elsewhere in this manual. All electrical and hydraulic equipment is dangerous. You must thoroughly review and understand the Safety Summary before attempting to operate, troubleshoot or service this baler.



Obey the following cautions and warnings before using your machine to avoid equipment damage, personal injury or death.

## Safety Symbols

The following symbols/terms are used to emphasize safety precautions and notices in this manual:



The “DANGER” symbol indicates a hazardous situation which, if not avoided, will result in death or serious injury. Carefully read the message that follows to prevent serious injury or death.



The “WARNING” symbol appears wherever incorrect operating procedures or practices could cause serious injury or death. Carefully read the message that follows to prevent serious injury or death.



The “CAUTION” symbol appears where a hazardous situation which, if not avoided, could result in minor to moderate injury and equipment damage.



*The “NOTICE” symbol alerts to a situation that is not related to personal injury but may cause equipment damage.*

### NOTE: ...

The term “NOTE” highlights operating procedures or practices that may improve equipment reliability and/or personnel performance, or to emphasize a concept.

Allied Systems Co. is concerned with safety. Freeman Equipment is furnished with safety features. Even with these safety features, personal injury can still occur if the operator is careless when operating or maintaining the machine. There are “CAUTION,” “DANGER,” and “BE CAREFUL” decals on the machine. Read and pay attention to the decals. Following is a list of precautions that should be taken to help prevent personal injury:

1. Keep all shields in place.
2. Shut off tractor and baler engine before adjusting, lubricating, cleaning or servicing the baler.
3. Wait for all movement to stop before servicing baler.
4. Keep hands, feet, and clothing away from power driven parts.
5. Keep all shields installed and keep clear of the P.T.O. drive line.
6. Keep all others off baler.
7. Make certain everyone is clear of baler before engaging P.T.O.
8. Do not ride on any part of the baler while in operation.
9. Keep hands and feet clear of pickup.
10. Keep hands away from knotter when baler P.T.O. drive is engaged.
11. Periodically check all nuts and bolts for tightness.
12. Always use lights for night work.
13. As a safety precaution it is recommended that an “abc” fire extinguisher be carried on the baler at all times. It is also recommended to carry a four gallon water container with pump, or as required by local and state law.
14. Avoid loose clothing which can easily be caught in moving parts.
15. Remember ‘safety’ is only a word until it is put into practice.

Be aware of the hazards of pressurized hydraulics:

» Wear personal protective equipment, such as gloves and safety glasses, whenever servicing or checking a hydraulic system.

» Assume that all hydraulic hoses and components are pressurized. Relieve all hydraulic pressure before disconnecting any hydraulic line.

» Never try to stop or check for a hydraulic leak with any part of your body; use a piece of cardboard to check for hydraulic leaks.

» Small hydraulic hose leaks are extremely dangerous, and can inject hydraulic oil under the skin, even through gloves.

» Infection and gangrene are possible when hydraulic oil penetrates the skin. See a doctor immediately to prevent loss of limb or death.



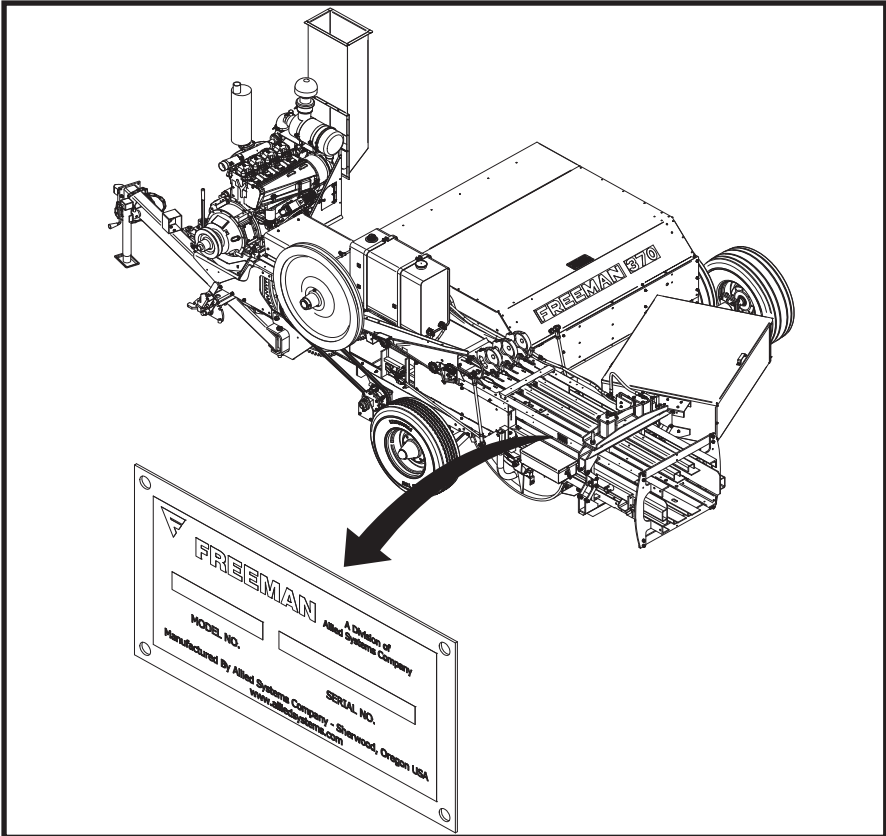
## **WARNING**

**WARNING:** Some illustrations in this parts list show the baler without shields to allow for a better view of the area being addressed. The baler should never be operated with any of the safety shields removed.

# Serial Number Location and Identification

The serial number is an important piece of information about the machine and it may be necessary to know it before obtaining the correct replacement part. The serial number plate is located on the left side of the baler above the tool box as shown.

Left and Right on the machine are understood to mean from a position facing in the direction of travel.



# Document List

## Parts Required

The following parts are included in the kit. Other parts may be used and should be retained as noted. Please check for the following items. If anything is missing, contact your Freeman dealer.

QTY	PART NUMBER	DESCRIPTION
1	904840	Tension Control Tank Assembly
1	904854	Top Chamber Shield Assembly
1	SPK0004030	2 7/16" Pinion Shaft Sprocket
1	FT00000556	Tension Control Drive Chain Assembly F/370
1	238879	Pressure Hose Assembly
1	245287	Return Hose Assembly
1	211560	Fitting; ST-CG6-S (Pressure)
1	R13801972	Fitting; EL-CG6-S (Return)
5		Capscrew; 3/8-16 UNC x 3/4" (Shield)
3		Capscrew; 3/8-16 UNC x 1" (Reservoir)
8		Lockwasher 3/8"
8		Flat Washer 3/8"
12		Tie Strap
6		Hose Clamp
1	904865	Hydraulic Schematic
1	86-037	Tension Control Kit Parts Addendum

# Installation Instructions

## ⚠ CAUTION

CAUTION: Park Baler on level ground and block tires before starting any maintenance.

## ⚠ WARNING

WARNING: Wait for all movement to stop before servicing Baler. Failure to do so could cause death, serious injury, and equipment damage.

## ⚠ WARNING

WARNING: Always shut off Baler and tractor before inspecting, adjusting, lubricating, or servicing baler. Failure to do so could cause death, serious injury, and equipment damage.

## ⚠ WARNING

WARNING: Relieve all hydraulic pressure before disconnecting any hydraulic lines.

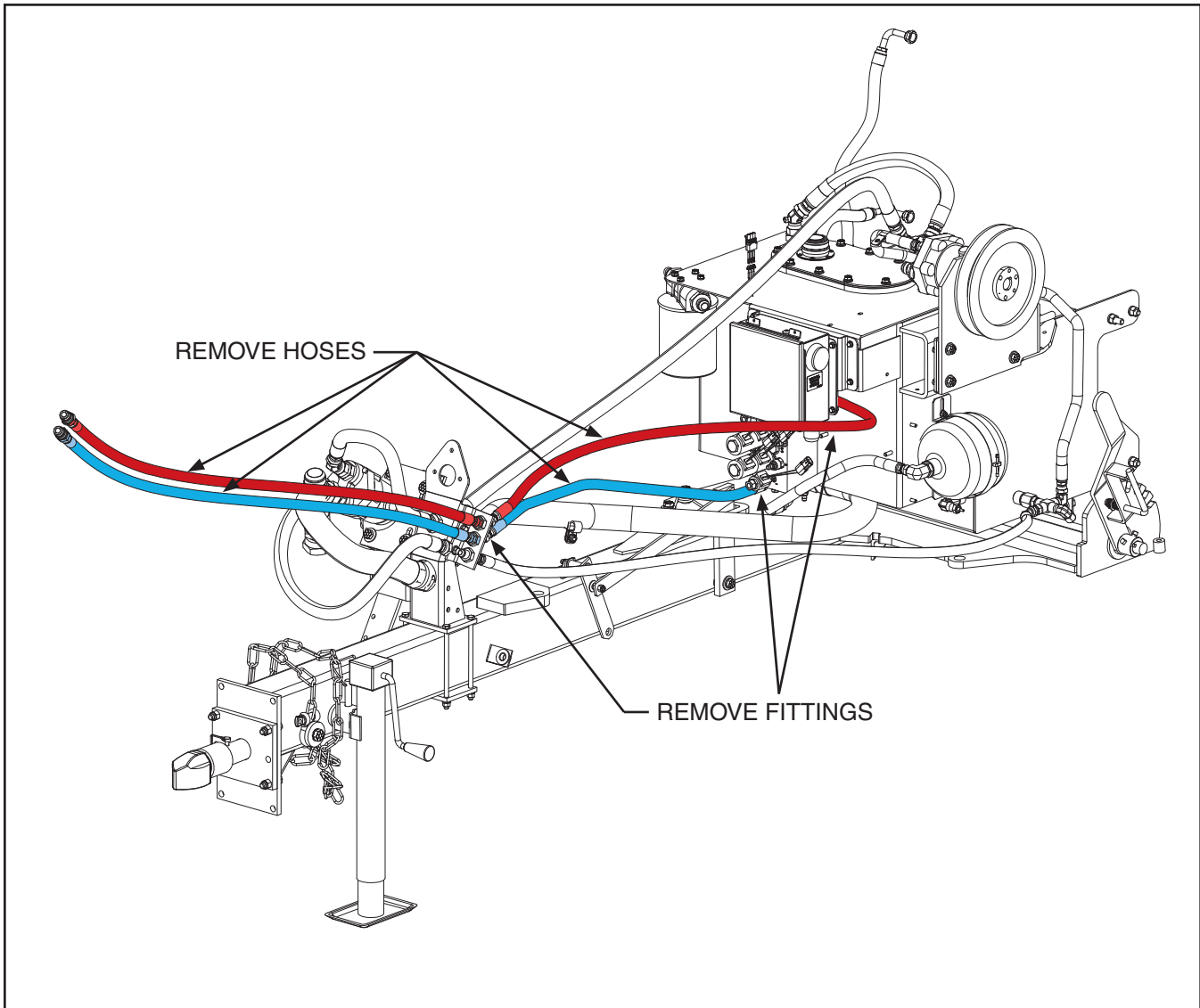


Figure 1

## Tension Control Kit Installation

1. Remove existing Pressure and Return hydraulic hoses between the tractor and the baler mounted hydraulic manifold (2 from tractor to drawbar mount, 2 from drawbar mount to baler mounted hydraulic manifold) (See Figure 1). These hoses will no longer be used.
2. Remove the fittings attached to the drawbar that were used to connect the Pressure and Return hydraulic lines from the tractor and manifold (See Figure 1). These fittings will no longer be used.

**Note: Retain the hardware as noted in the next step; it will be re-used later.**

3. Remove the existing Top Chamber Shield from the top of the baler. Retain the hardware as noted (See Figure 2). This shield will no longer be used.
4. Drill and tap three (3) 3/8"-16 UNC tapped holes in the frame (See Figure 3). These threaded holes will be used for mounting the new Reservoir Assembly and new Top Chamber Shield.

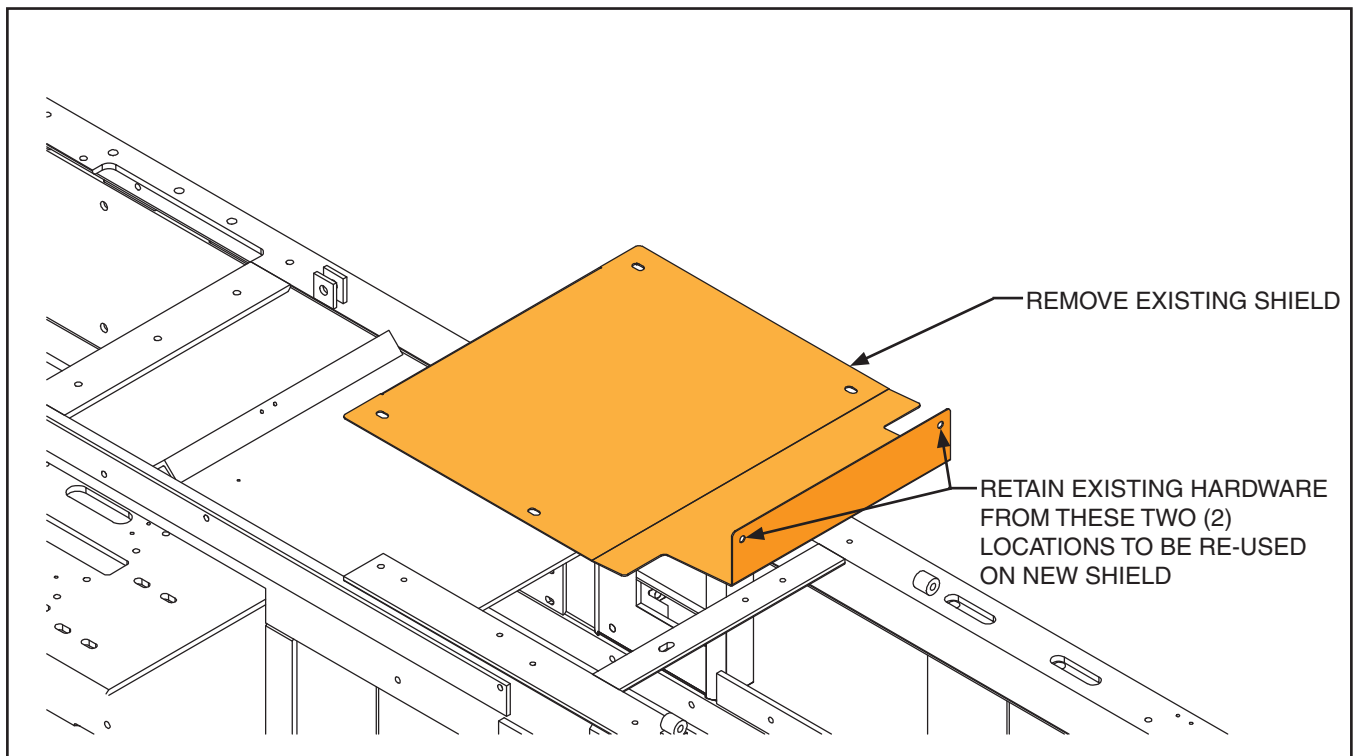


Figure 2

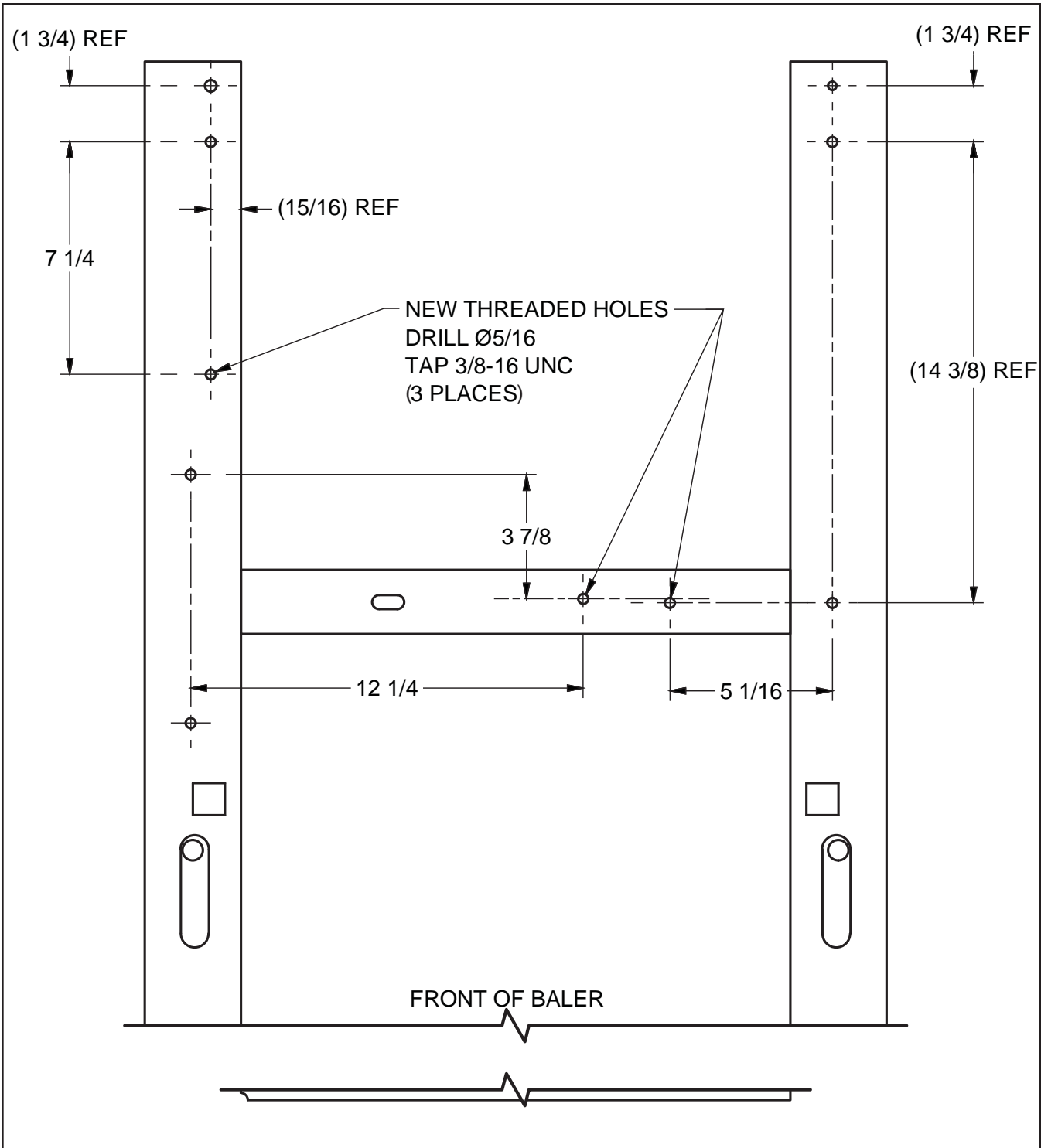


Figure 3



5. Place Tank Assembly on Frame, **but do not fully tighten** (See Figure 4). Install mounting fasteners (3/8"-16 UNC Cap Screw x 1", 3/8" Lockwasher, 3/8" Flat washer).
6. Install the new Pinion Shaft Sprocket on the existing Main Pinion Shaft (See Figure 4). When installing the sprocket, place the teeth side of the sprocket up against the Main Pinion Shaft Bearing as shown. The Sprocket should be touching the Bearing.
7. Using the set screw holes in the sprocket hub as a guide, drill dimples in the main pinion shaft to receive the Sprocket set screws.
8. Place the 1/2" Pitch Chain Assembly (P/N FT00000556) over the two (2) sprockets. Use the provided connector and offset links as needed so that the chain can be properly tightened within the adjustment range of the Tank Assembly. (See Figure 4)
9. Tighten the Chain by moving the Tank Assembly. The chain should be tightened so that at the mid-span of the chain it deflects between 1/2" to 3/4". Tighten the Tank Assembly bolts and re-check the chain deflection.

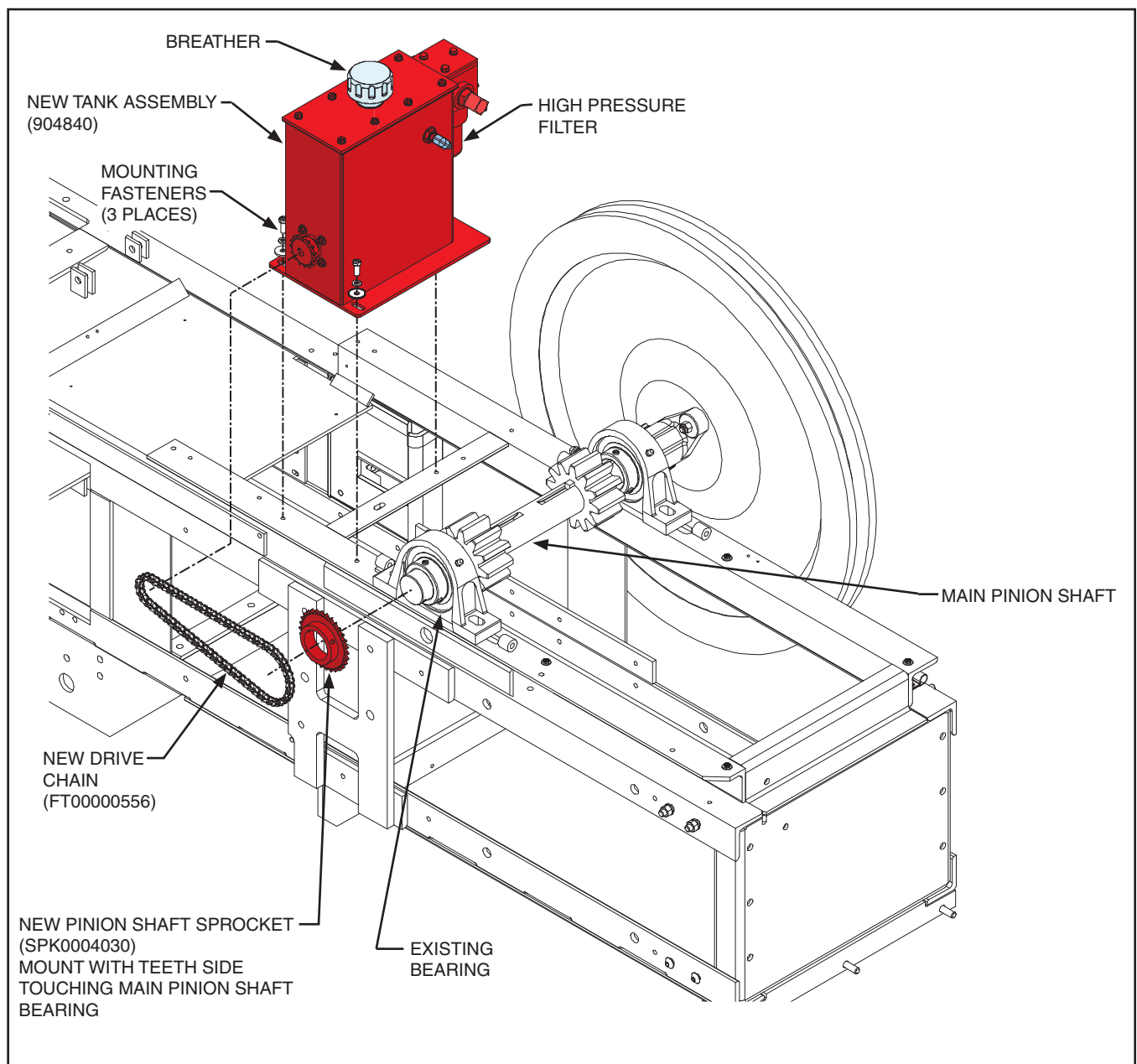


Figure 4

10. Install the new Top Chamber Shield using the provided fasteners (3/8"-16 UNC Cap Screw x 3/4", 3/8" Lockwasher, 3/8" Flat washer) and the existing hardware removed in step #3 (See Figure 5).
11. Remove the two (2) fittings from the baler mounted, hydraulic manifold (See Figure 6). Install new fittings (P/N's 211560 & R13801972) in manifold.
12. Install the new Hydraulic Hoses (See Figures 5 and 6). Connect the Pressure Line to the filter fitting on the Reservoir and the top of the baler mounted manifold. Connect the Return Line to the Reservoir Tank and the bottom of the baler mounted manifold.
13. Use the included Tie Straps and Clamps as needed to secure the hoses to the baler. Keep hoses clear of moving parts and sharp edges.
14. Remove the breather (See Figure 4) from the top of the Reservoir Assembly, and use the opening to fill the hydraulic reservoir with 3 gallons of hydraulic oil (Mobil Hydraulic Oil 424 or equivalent).
15. Disconnect the Pressure Line at the baler mounted hydraulic manifold (See Figure 6) and place the loose end of the hose in a 5 gallon bucket or similar container.

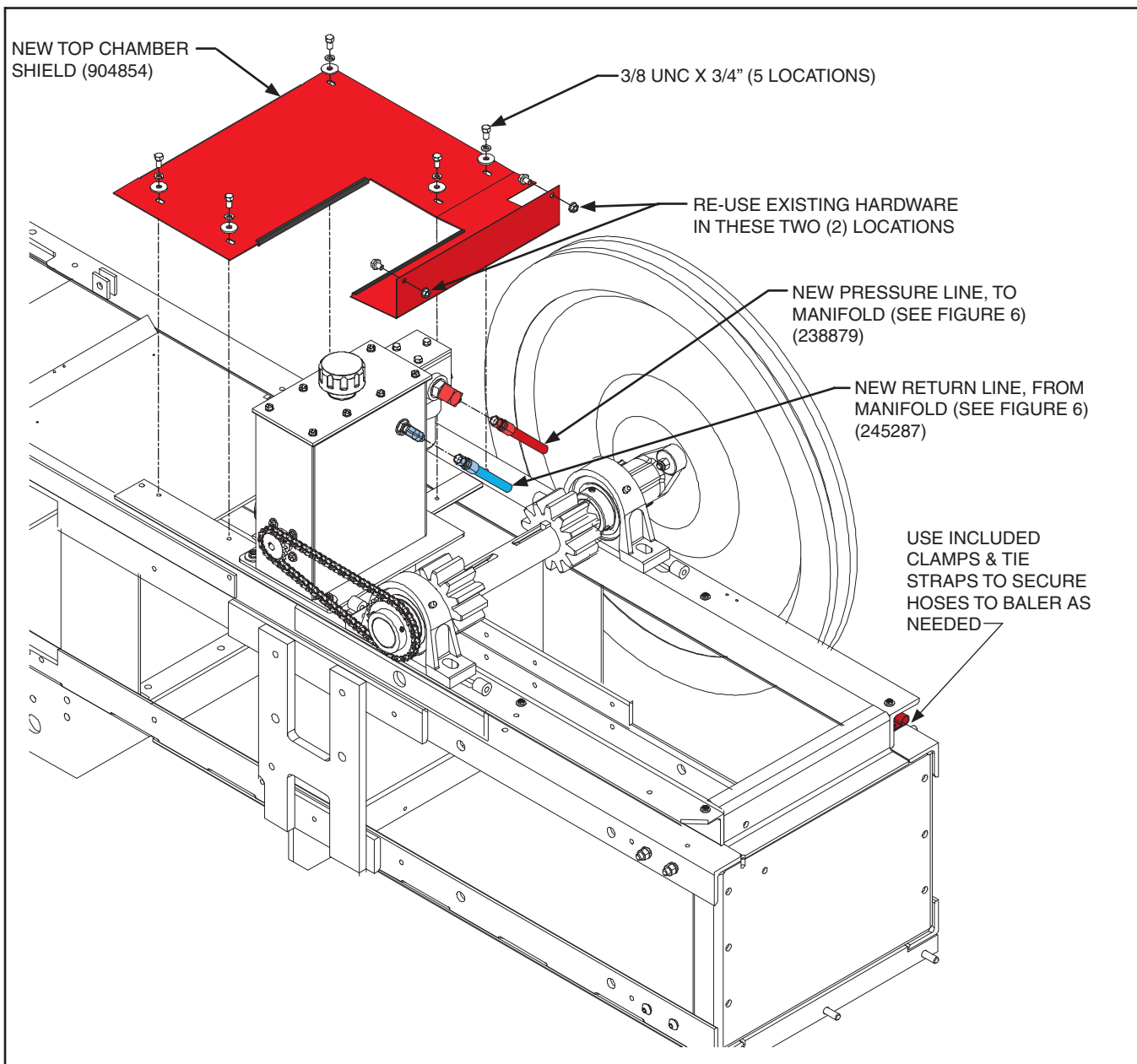


Figure 5

16. Manually rotate the baler flywheel counter-clockwise until fluid comes out of the hose and into the container. Continue to rotate the flywheel until approximately 1 quart of hydraulic oil is in the container. Re-attach the end of the hose to the baler mounted hydraulic manifold.

**Note:**

Dispose of hydraulic fluid properly according to local regulations.

17. Add fresh hydraulic oil (Mobil Hydraulic Oil 424 or equivalent) to the Reservoir Assembly.

18. Start the baler.

19. Using Hydraulic Schematic 904865 (see page 13), go through the Valve Setup Instructions for setting the pressure system.

20. Using the Baler Control Screen, adjust the desired tension pressure to its maximum setting of 100%. The hydraulic pressure for the system should increase to at least 2,000 psi.

21. Set the tension to your desired setting.

22. This completes the setup of the Reservoir Assembly and Tension Control System.

**! WARNING**

**Make sure people, tools and equipment are away from baler and all shields are in place before starting the baler.**

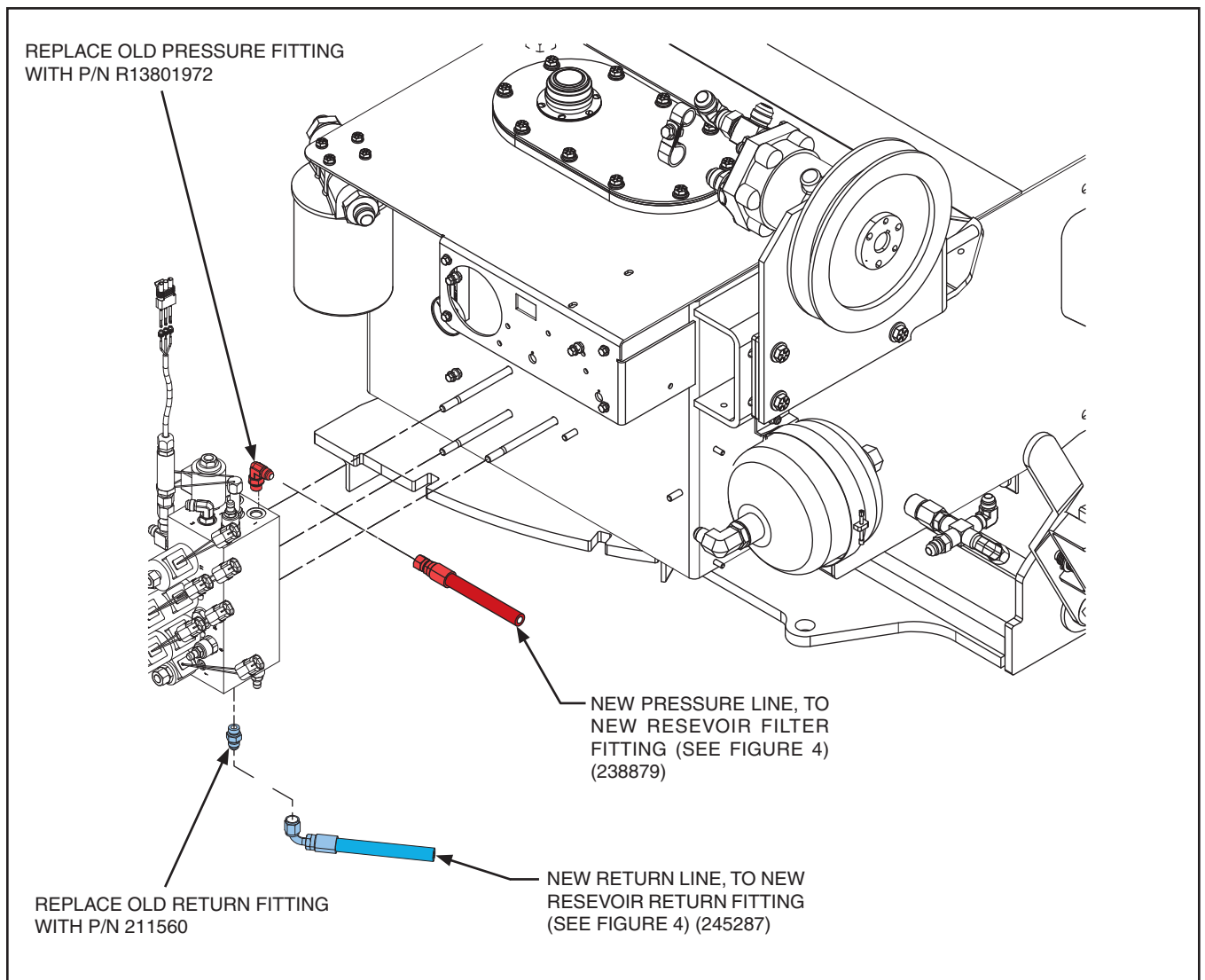


Figure 6



To find a dealer in your area,  
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Visit our website: <http://www.alliedsystems.com>

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