ROUND BALER GEARBOXES

After more than 10,000 hours of lab testing and a season of field testing, the Weasler 4090 series gearbox was approved for full production with a major round baler OEM. The rigorous testing included ratios of 1:1 and 1.35:1, which are common to round baler applications. Testing parameters were developed that simulated the maximum load conditions from the application to ensure proper gear and bearing performance over the life of the baler. A side-by-side test was conducted to compare Weasler’s gearbox with a leading competitor’s gearbox. The test showed no significant differences in performance.

DESIGN FEATURES:

- **Shafts are 5140 steel**
- **Gears are made from 5120 steel and heat treated**
- **Various ratios, shaft configurations & housing styles available**
- **Standard Configuration**
  - Tapered Roller Bearings
  - Double Lipped Seals
  - Die Cast Aluminum Housing
- **1:1 Ratio**
- Forged Bevel Gears
- **Ratios other than 1:1**
  - Forged blank gearing with cut teeth
  - One-piece pinion/shaft
- **Available Options**
  - Dipstick
  - Vent or 5 PSI pressure relief
  - Right angle or T-box configuration

Engineering assistance is available on an as required basis.
A TOTAL OF 10,000 HOURS OF LAB TESTING WAS PERFORMED TO GATHER INFORMATION AND PROVE OUT THE
DESIGN OF THE WEASLER 4090 SERIES GEARBOX. THE TEST PARAMETERS WERE DEVELOPED THAT SIMULATED A
FULL BALER LIFE CYCLE IN 500 HOURS WHILE SIMULATING ACTUAL FIELD CONDITIONS. AN ARTICULATING 4-
SQUARE TEST STAND CAPABLE OF A CONTINUOUS 100 HP WAS USED TO PERFORM A SERIES OF FIVE TESTS.

IN ADDITION TO THE LAB TESTING, A MAJOR ROUND BALER OEM FIELD TESTED THE 4090 SERIES GEARBOXES FOR
ONE SEASON TO PERFORM THEIR OWN EVALUATION. THE TEST RESULTS AND FEEDBACK FROM THE
CUSTOMER SHOWED THE DESIGN OF THE WEASLER 4090 GEARBOX CAN HANDLE THE TOUGHEST CONDITIONS IN
ROUND BALER APPLICATIONS.