

## INTRODUCTION

### LINERS

When it comes to mud pump fluid end expendable parts, TSC Manufacturing and Supply, LLC. has it all.

TSC mud pump liners are designed and manufactured to meet or exceed original equipment specification and API standards for almost all types of mud pumps in use today. With advanced technology, metallurgical control and rigid inspection, we offer unmatched performance and durability according to customer testimonies in the most severe drilling conditions, both triplex and duplex liners are available in a wide range of sizes.

### HIGH CHROME SLEEVE LINER

The outer hull, or body, of the liner is manufactured using high-strength forging. TSC uses forgings exclusively to ensure consistent quality. The sleeve is centrifugally cast in the TSC facilities by skilled craftsmen. It has the maximum amount of chrome for the base metal and TSC adds molybdenum to increase the hardness depth. The sleeve is then inserted into the hull at a tightness that exceeds its counterparts. The TSC liner is rated to match the pressure rating of the pump per liner size.

**TSC mud pump liners are unsurpassed in quality and reliability.**

#### Features

- Rated for all drilling operations.
- Bore hardness is 62-69 Rockwell.
- "HP" lip design to prevent inner sleeve slippage.
- Extremely long service life.



### CHROME-PLATED LINER

TSC chrome-plates the same outer hull in lieu of the sleeve to maximum thickness. The hulls are then machined and polished to a mirror finish.

## FLUID END EXPENDABLES

| EMSCO                      |                 | F-350         |                          |                       |                      | 6-3/4 x 7                   |                          |
|----------------------------|-----------------|---------------|--------------------------|-----------------------|----------------------|-----------------------------|--------------------------|
| LINERS                     |                 | LINER GASKETS | PISTONS                  |                       |                      |                             | PISTON RUBBER            |
| SIZE                       | PART NUMBER     | PART NUMBER   | URETHANE BONDED          | RUBBER BONDED         | N'DURALL BONDED      | REPLACEABLE RUBBER          | PART NUMBER              |
| 4"                         | TS-0146-40HP    | G-281 *       | LLU-40-K10               | LL-40-K10             | HPW-40-K10           | I-40-K10                    | TM-40-KR                 |
| 4 1/2"                     | TS-0146-44HP    | G-281 *       | LLU-44-B10               | LL-44-B10             | HPW-44-B10           | I-44-B10                    | TM-44-BR                 |
| 5"                         | TS-0146-50HP    | G-281 *       | LLU-50-B10               | LL-50-B10             | HPW-50-B10           | I-50-B10                    | TM-50-BR                 |
| 5 1/2"                     | TS-0146-54HP    | G-281 *       | LLU-54-B10               | LL-54-B10             | HPW-54-B10           | I-54-B10                    | TM-54-BR                 |
| 5 3/4"                     | TS-0146-56HP    | G-281 *       | LLU-56-B10               | LL-56-B10             | HPW-56-B10           | I-56-B10                    | TM-56-BR                 |
| 6"                         | TS-0146-60HP    | G-281 *       | LLU-60-B10               | LL-60-B10             | HPW-60-B10           | I-60-B10                    | TM-60-BR                 |
| 6 1/4"                     | TS-0146-62HP    | G-281 *       | LLU-62-L10               | LL-62-L10             | HPW-62-L10           | I-62-L10                    | TM-62-LR                 |
| 6 1/2"                     | TS-0146-64HP    | G-281 *       | LLU-64-L10               | LL-64-L10             | HPW-64-L10           | I-64-L10                    | TM-64-LR                 |
| 6 3/4"                     | TS-0146-66Cr    | G-281 *       | LLU-66-L10               | LL-66-L10             | HPW-66-L10           | I-66-L10                    | TM-66-LR                 |
| VALVES, SEATS, SPRINGS     |                 |               |                          |                       | GASKETS              |                             |                          |
|                            | 4 WEB DESIGN    | 3 WEB DESIGN  | FULL OPEN (1)            | FULL OPEN (2)         |                      | PART NUMBER                 |                          |
| VALVE                      | TS-5-M5B5       | -             | -                        | TS-5-V1               | VALVE COVER GASKET   | G-733 *                     |                          |
| SEAT                       | TS-5-DDB1       | -             | -                        | TS-5-S1               | CYLINDER HEAD GASKET | G-281 *                     |                          |
| SPRING                     | TS-5710-111     | -             | -                        | TS-5710-111           | WEAR PLATE GASKET    | N/A                         |                          |
| INSERT (Urethane)          | TS-5-WI         | -             | -                        | TS-5-FI               | EXTENSION ROD SEAL   | -                           |                          |
| INSERT (Rubber)            | -               | -             | -                        | -                     | EXTENSION ROD BAFFLE | -                           |                          |
| PISTON ROD & EXTENSION ROD |                 |               |                          |                       |                      |                             |                          |
| ROD CLAMP                  | PISTON ROD STUD | PISTON NUT    | THREADED TYPE PISTON ROD | CLAMP TYPE PISTON ROD | SUB ROD              | THREADED TYPE EXTENSION ROD | CLAMP TYPE EXTENSION ROD |
| TMF05-03-08                | N/A             | TM-NUT1       | N/A                      | TM-147                | N/A                  | N/A                         | TMF05-01-06              |
| FLUID END MODULE           |                 |               |                          |                       |                      |                             |                          |
| FLUID END MODULE STUDED    |                 |               |                          | MODULE SEAL SET       |                      | STUDS & NUTS SET            |                          |
| TS-6318-0151-00            |                 |               |                          | TMF05-SEALKIT         |                      | TMF05-STUDSET               |                          |

TSC does not warrant or represent that any of such information is accurate, or that any products listed are compatible with each other.  
Any deviations from the OEM products should be verified as to compatibility.