



***Ergonomics of Underground
Coal Mining Equipment
Seminar - 17th Oct 2006***

***JOY MINING MACHINERY
SHUTTLE CARS
&
CONTINUOUS MINERS***



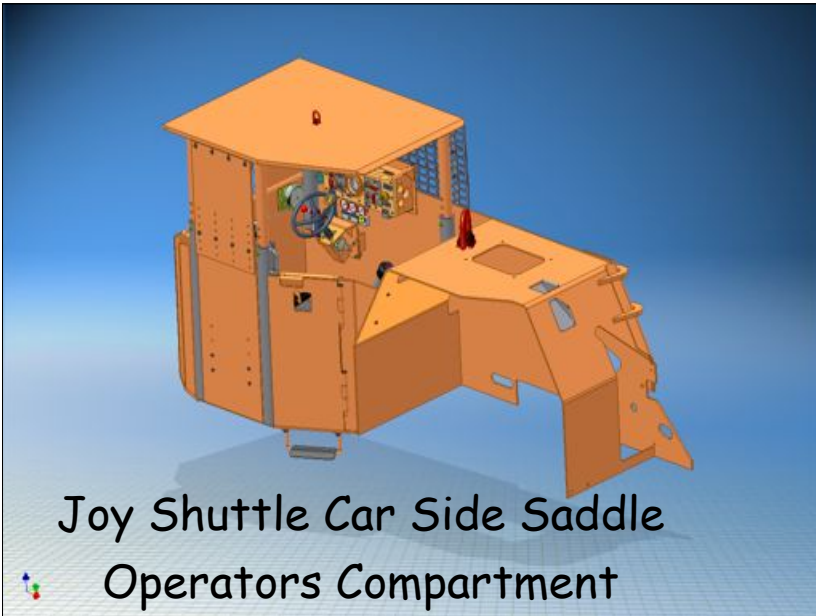
OVERVIEW

- **Shuttle Car**
 - Operators Cab
 - Suspension System
- **Continuous Miner**
 - Increasing Bolter Platform Space
 - Retro Kit Two Handed Bolting Controls

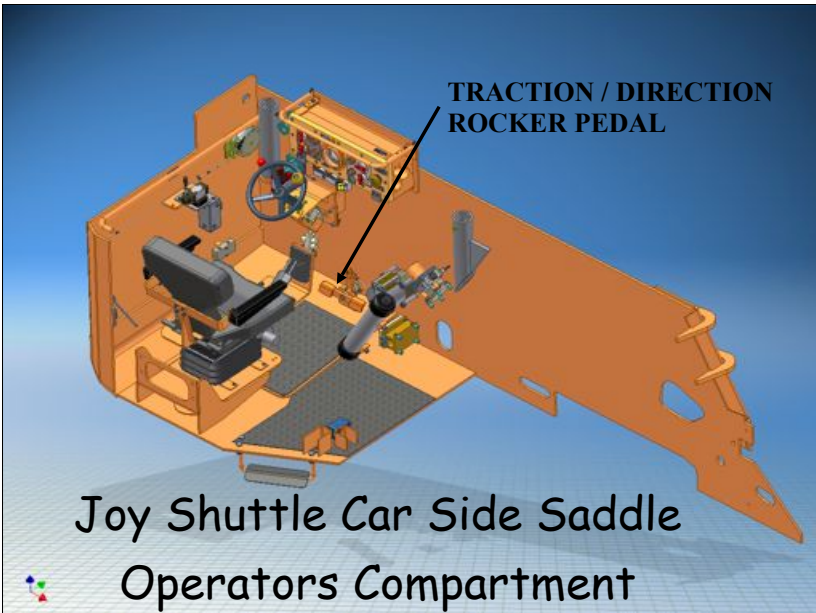
OLD STYLE CAB



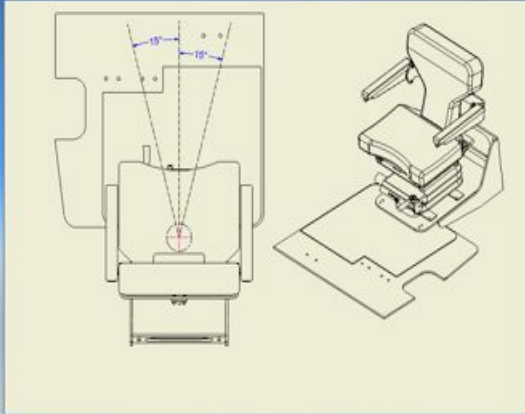
NORTH / SOUTH ENCLOSED CAB



Joy Shuttle Car Side Saddle
Operators Compartment



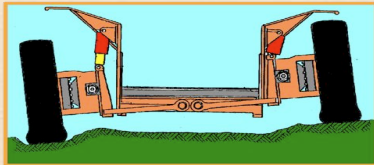
Joy Shuttle Car Side Saddle
Operators Compartment



Side Saddle Operators Seat
Additional Movement



Joy Shuttle Car Suspension Purpose of Design



To isolate and reduce the shock and vibration forces that are generated by tramming over bad bottom from being transmitted to the frame and body of the shuttle car



Joy Shuttle Car Suspension

- Four wheel independent operation
- Proven design
- Uses existing wheel units
- Simple, robust design for easy care / long life



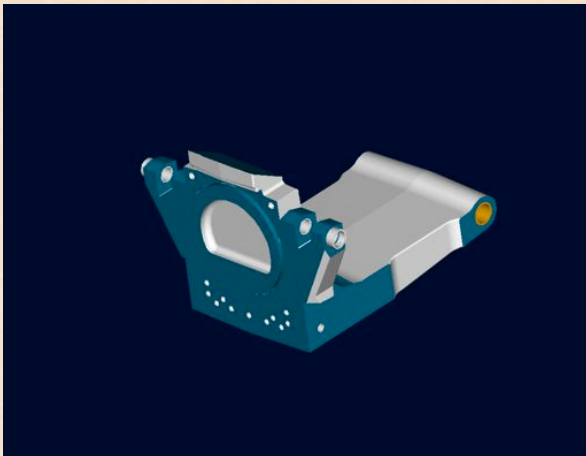


Joy Shuttle Car Suspension

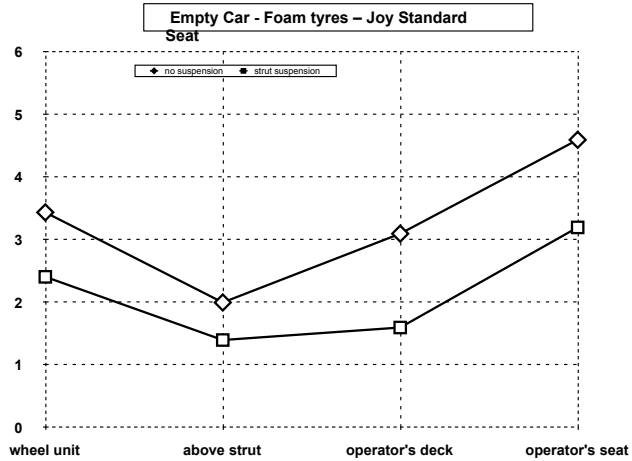
Strut
Parts



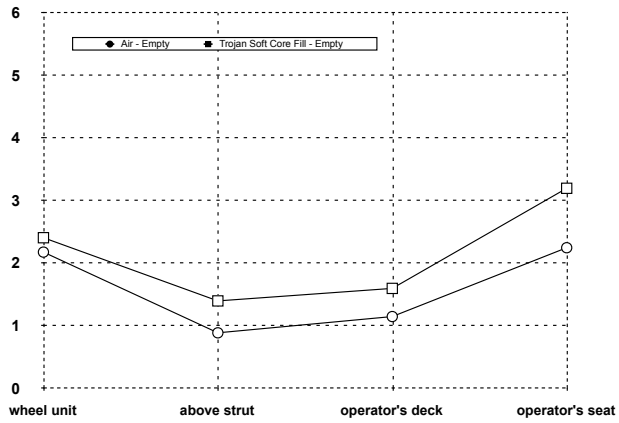
Pivot Axle



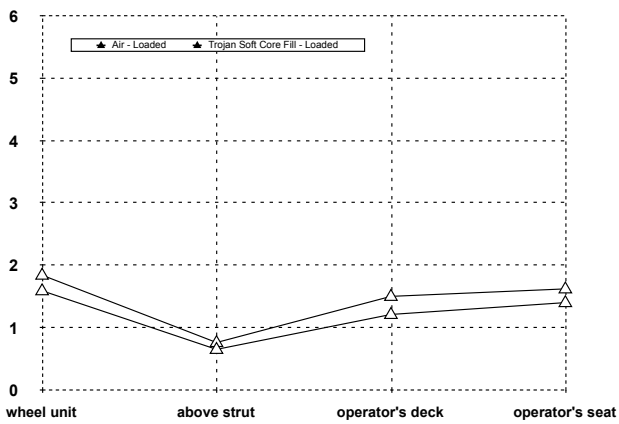
Joy Shuttle Car Suspension Performance



Tyre Performance



Tyre Performance

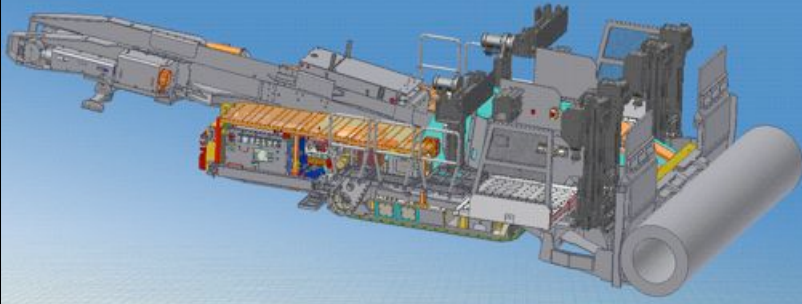


CONTINUOUS MINER

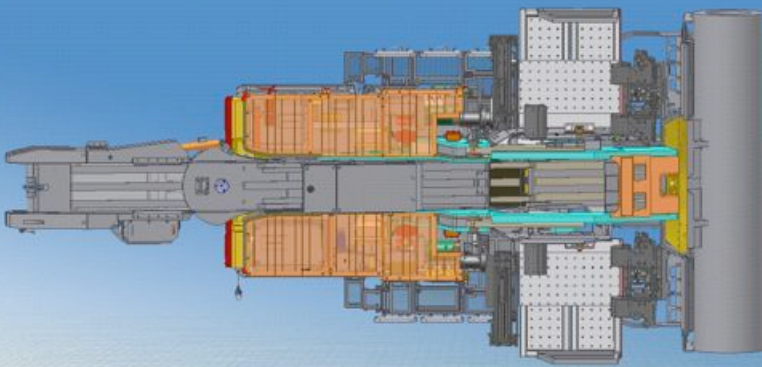
DRILL RIG LOCATION & OPERATOR PLATFORM



12CM30 WITH PLOUGH



12CM30 WITH PLOUGH



TWO HANDED RETRO KIT – ICM2 VALVE

